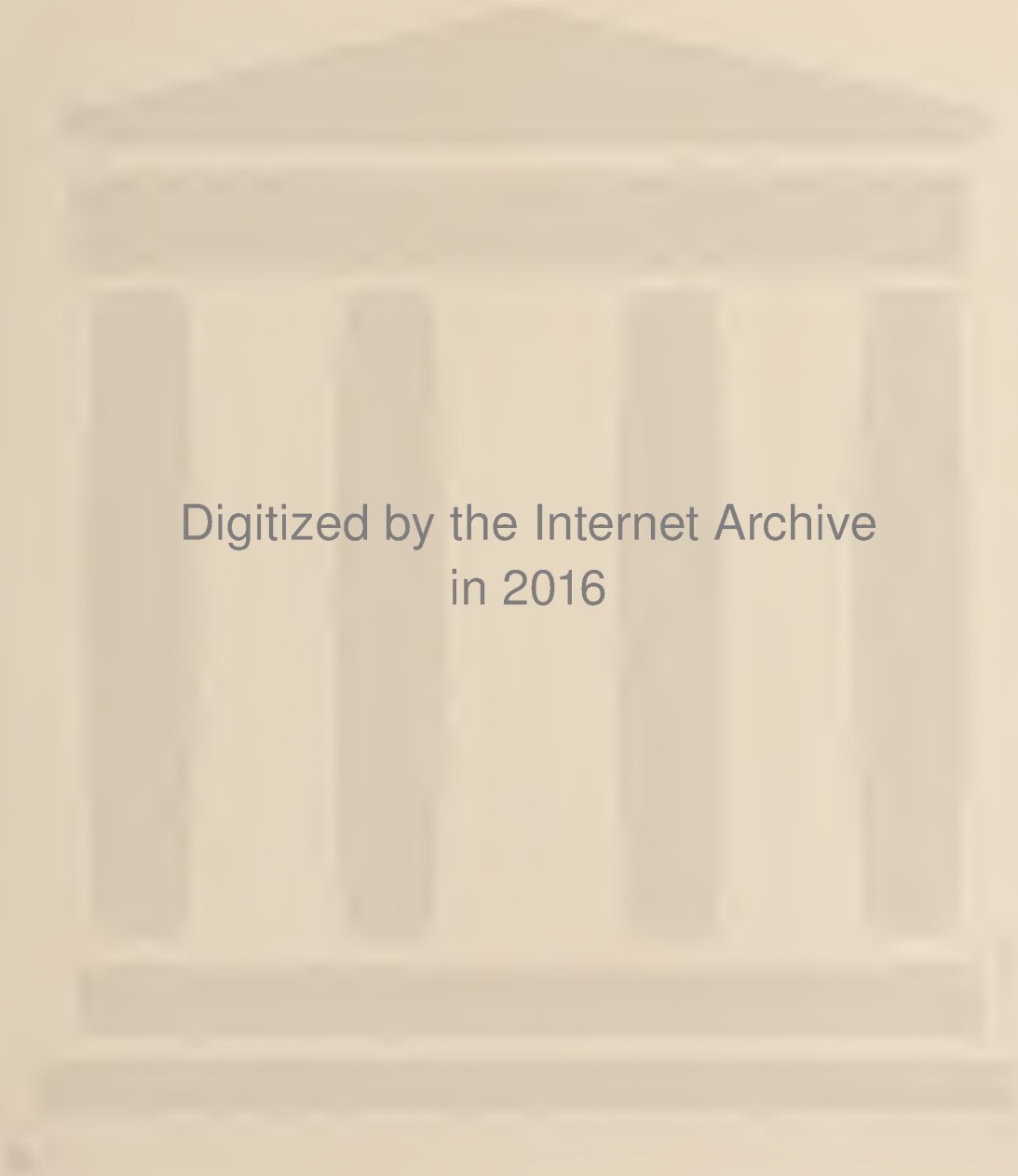
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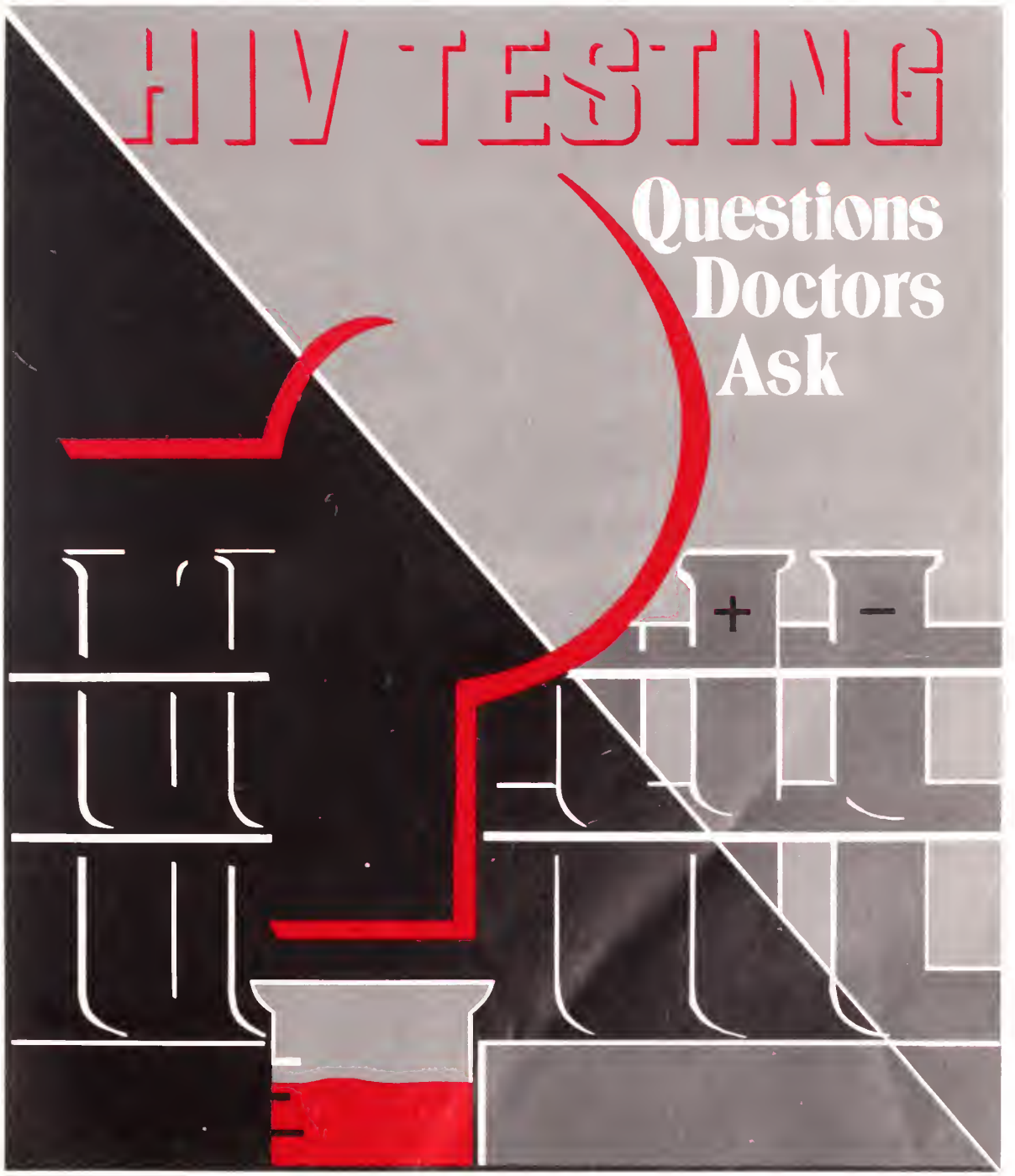
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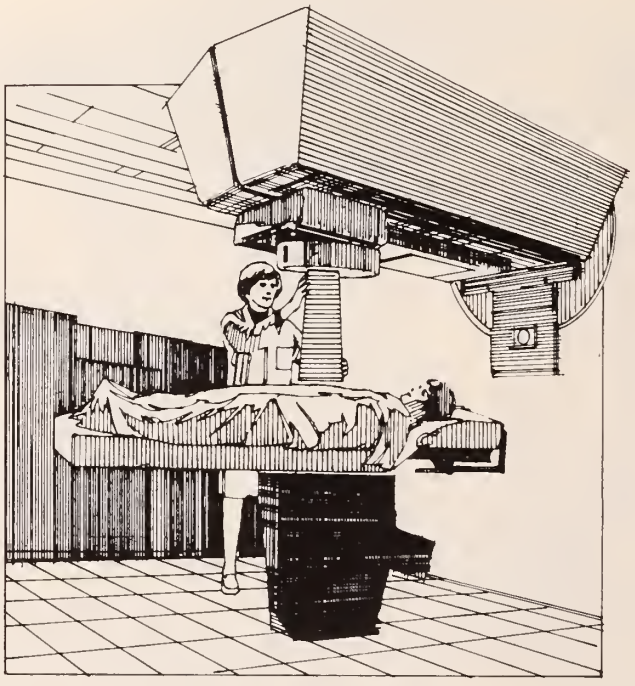
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NEWSLETTER

January 1990

Dear Doctor:

Physicians in the Hinds County area are advised that the National Center for Health Statistics will be conducting a major study of the health of persons in the area who are two months of age and older. According to David L. Larson, chief of the Department of Health and Human Services' Division of Health Statistics, the survey is part of the U.S. Public Health Service's continuing study of the nation's health. For 27 years similar surveys have been conducted across the country.

> Data are collected from selected individuals through household interviews and standardized medical examinations in a specially-equipped mobile examination center. The survey will take place in Hinds County from February 23 through April 26.

"Management of HIV Disease for the Primary Care Physician" will be held February 22-24 in New Orleans. An estimated 1.5 million persons in this country are infected with the HIV virus. In 1992 as many as 65,000 may die of AIDS in that year alone. For that reason, say conference sponsors, there is a mandate to the "frontline" of medicine - the primary care physician - to become aggressively involved in both the prevention and management of AIDS. Co-sponsors are the LSU Medical School and the Delta Region AIDS Education and Training Center in cooperation with the AMA and the American Academy of Family Physicians. Among the nationally recognized speakers are Dr. Robert Redfield of Walter Reed Hospital, Dr. Michael Hickey of San Francisco, Dr. Michael Polis of the National Institutes of Health, and Dr. Ronald Grossman, a primary care physician from New York City who has treated more than 500 patients with AIDS. For information about the meeting call Dr. Sandra Mahkorn at (504) 362-9355.

IMPORTANT DATES: January 18 -- MSMA's Leadership Conference in Jackson; May 30-June 3 -- MSMA's 122nd Annual Session in Jackson. Mark your calendar and plan to attend.

Sincerely,

Patsy Silver
Managing Editor



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DATELINE

Regulations Drawn For Medical Waste Disposal

Jackson, MS - The State Board of Health has adopted "Standards for the Regulation of Medical Waste." The standards define medical and infectious waste and provide that all "generators" of such waste have a waste management plan that includes storage, treatment and disposal. An MSMA committee helped to develop the standards. A suggested plan for disposal of medical waste will be furnished to concerned physicians.

Deadline Approaches For Exhibit Applications

Jackson, MS - MSMA members wishing to participate in the Scientific Exhibit during the 122nd Annual Session should apply now for space. Exhibitors are eligible for the Aesculapius Award which is presented annually to oustanding scientific exhibits. To apply, send a letter to MSMA headquarters requesting exhibit space and furnish the title of the display, names of all exhibitors, and estimated number of linear feet required.

Last Call for Community Service Award Nominees

Jackson, MS - MSMA component societies have been invited to submit nominees for the 1990 MSMA Community Service Award. The award is presented annually to a member who displays outstanding community concern and civic activity. The award consists of a plaque and a donation to a charity designated by the winner. The Community Service Award will be presented during the MSMA's 122nd Annual Session, May 30-June 3 in Jackson.

Rural Health Office Is Legislative Goal

Jackson, MS - The State Department of Health will seek legislative approval to establish an Office of Rural Health to serve as a resource and clearinghouse to assist small communities in addressing their health needs. ...The National Rural Health Association has received a contract that will permit researchers to explore one of the most pressing rural health issues - the supply and distribution of health professionals in rural areas.

Lab Reports for HIV-1 Often Confusing, Wrong

Chicago, IL - The December 22 issue of JAMA reports that some labs may be issuing confusing and sometimes erroneous blood test results for the human immunodeficiency virus associated with AIDS. The authors of the blind study report that "these results, obtained from a small number of laboratories, highlight major problems associated with HIV testing, interpretation, and reporting of results."

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
January 1990, Volume XXXI, Number 1

ORIGINAL PAPERS

Hemobilia Presenting as Lower Gastrointestinal Hemorrhage Without Pain or Jaundice: A Case Report

CHARLES V. POLLACK, JR., M.D.
Jackson, Mississippi

Hemobilia is a rare source of gastrointestinal (GI) hemorrhage. When hepatobiliary bleeding presents as GI bleeding, a history of preceding blunt abdominal trauma is reported in approximately 50% of cases. Often three to four weeks have elasped between the injury and presentation, and as long as twelve weeks has been reported. Symptoms may suggest either upper or lower GI blood loss.

Traumatic hemobilia is commonly associated with cavitary injuries to the liver, and is classically characterized by a triad of findings: GI bleeding, biliary colic, and jaundice. This report describes a patient with traumatic hemobilia, who had neither a significant hepatobiliary injury, nor the classic triad of findings.

THE PATIENT, a 37-year-old white male, presented to the emergency department of a community hospital with a two-day history of hematochezia and with orthostatic symptomatology for one day. He denied any history of abdominal pain or trauma. There was no history of previous GI bleed, or of any GI or hepatobiliary disease. He gave no history of a bleeding disorder. He had had two episodes of emesis that day, and had noted no blood or coffee ground material in the vomitus. He admitted to a long history of alcohol abuse, consuming one to two pints of liquor per day. He had never been hospitalized as an adult. He had no regular physician and was taking no medications. He worked in the cattle industry and smoked one pack of cigarettes daily.

The patient appeared pale and weak, and was markedly orthostatic with vital signs on arrival as follows: pulse 126 and blood pressure 92/64 supine, respirations 20, and oral temperature 98.5F. Examination of the head, eyes, ears, nose, and throat was remarkable only for pale conjunctivae and dry mucous membranes. The lungs were clear and the heart rate was regular and rapid without murmur or gallop. The abdomen was soft and nontender; the liver edge was nontender and barely palpable below the right costal margin. Rectal examination revealed soft, melanic stool, bright red blood, and no masses or hemorrhoids. Neurologic examination was not remarkable; the patient was not intoxicated.

A nasogastric tube was placed and the clear gastric aspirate showed no evidence of blood. Initial laboratory values were: WBC 10.4 $\times$ $10^3/mm^3$, hemoglobin 6.6 g/dL, hematocrit 19.7%, and plate-

Dr. Pollack is a resident in the Division of Emergency Medicine, University Medical Center, Jackson, Ms.

lets 228,000/mm^3. Red cell indices were MCV 101.9 μm^3, MCH 34.0 pg, and MCHC 33.4 g/dL. Prothrombin time and partial thromboplastin time were normal. Chemistry values were Na 131, K 3.7, Cl 96, CO_2 21, BUN 19, creatinine 1.2, glucose 96, ALKP 43, SGOT 71, SGPT 27, LDH 101, amylase 25, and total bilirubin 0.7. An electrocardiogram revealed sinus tachycradia, and plain abdominal and chest radiographs were normal.

The patient's blood was typed and crossmatched, and he was admitted to the intensive care unit with a diagnosis of acute lower GI bleeding. The patient was transfused with two units of packed red blood cells; his post-transfusion, post-hydration hematocrit was 21.9%. Gastroenterological and surgical consultations were obtained, and the patient underwent flexible sigmodiscopy. Large amounts of dark red blood were seen originating from higher than 25 cm. Upper endoscopy was then performed, revealing a normal esophagus, stomach and proximal duodenum; however, blood was seen to be oozing slowly from the ampulla of Vater. Endoscopic retrograde cholangiopancreatography was subsequently performed and was unremarkable.

Transfusion of another two units of packed red blood cells was ordered. With the observation of hemobilia, the patient was again questioned regarding a history of abdominal trauma. Only at that time did he recall a stockyard mishap of two weeks previous, in which a large calf he was roping knocked him down and rolled over his abdomen. He further related a subsequent 7-10 day history of right upper quadrant abdominal pain, which he self-treated with an increased alcohol intake. He gave no history of hematemesis, hematochezia, or melena during this period.

The post-transfusion hematocrit was 33.4%. Double-contrast computed tomography of the abdomen revealed portal cirrhosis with fatty infiltrates of the liver and a normal gallbladder. There was no anatomic injury to the liver or other abnormality noted.

The patient at this time had stabilized. It was assumed that the source of his bleeding had been his cirrhotic liver, the friable parenchyma of which had been subjected to blunt trauma and had been slowly losing blood into the biliary tract and subsequently into the bowel. A decision to manage the patient expectantly was made by the attending and consulting physicians. He was followed closely with serial hemograms.

Over the course of a six-day hospitalization he received an additional two units of blood, and his hematocrit and clinical examination stabilized. He was not re-endoscoped, and did not develop delirium tremens. He was discharged on iron supplementation with a hematocrit of 36.3%. As an outpatient one week later, his hematocrit was 40.0%. He was lost to further follow-up.

Discussion

This patient apparently developed a primarily lower GI bleed from relatively occult liver trauma with resultant hemobilia. The classic triad of findings associated in the literature with traumatic hemobilia was not present in this case. It is more likely that the patient's (presumed alcoholic) cirrhosis was responsible for a slow but steady blood loss from the liver parenchyma without the more typical significant anatomic liver injury, and without high bilirubin levels. The patient did have right upper quadrant pain for 7-10 days after his injury, but had no pain or tenderness upon presentation with melena and hematochezia.

Hemobilia has been reported as a result of trauma,[1-8] cholecystectomy and other heptobiliary surgical procedures,[2, 4, 7] hepatic artery aneurysms, [1, 2, 4, 9] inflammation and infection,[1, 2, 4, 7] and neoplasm.[1, 2, 4] It has been estimated that the source of bleeding in significant hemobilia is the liver in 50% of cases, the gallbladder in 25%, and the duct system in 25%.[1] The diagnostic triad is actually seen uncommonly, but it is most often present in cases of traumatic etiology.[2, 4, 7]

Significant traumatic hemobilia is almost always treated surgically, because it generally involves significant and reparable anatomic injuries.[1-7, 9] In this case, it appears that the injury, which was precipitated as much by the preexisting condition of the liver as by the trauma itself, had nearly run its course when the patient presented.

Judging from the weight of reported cases, this was an unusual situation that allowed successful nonoperative management of the patient. Had endoscopy not been performed at a time when bleeding was active, the diagnosis of hemobilia likely would not have been made. Treatment, however, would not have changed significantly.

Summary

Hemobilia, while an unusual cause of GI bleeding, can be catastrophic if it is not recognized and if surgical lesions are not repaired in a timely manner. The oft-cited association of biliary colic and jaundice with GI bleeding (upper or lower) need not be present, even in cases of traumatic origin. Precipitating trauma may be occult and usually occurs well before the patient presents with bleeding. Phys-

ical examination may be unremarkable. Endoscopy and computed tomography can often establish the diagnosis; hepatic angiography may be necessary.[1, 2, 4, 5, 7, 8]

This case demonstrates that cirrhosis may predispose the liver to diffuse injury and resultant hemobilia from blunt abdominal trauma insufficiently severe to cause cavitary injury; blood loss may nevertheless be profound. Hemobilia must be considered in all cases of GI bleeding that do not have an obvious source, particularly if there is a history of blunt abdominal trauma or of preexisting hepatobiliary disease. ★★★

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Radiological Seminar CCXLIV: Wegener's Granulomatosis

F. ALAN LOVELL, M.D.
Jackson, Mississippi

WEGENER'S GRANULOMATOSIS is a rare form of necrotizing vasculitis of unknown etiology but apparently represents a hypersensitivity or autoallergic process. The disease is characterized by a triad of acute necrotizing granulomas of the upper and lower respiratory tract, focal necrotizing vasculitis most prominent in the lung and upper airways and renal disease in the form of focal or diffuse glomerulitis. Males are more commonly affected than females and the peak incidence occurs in the fifth decade. In addition to the more common widespread form of the disease, limited forms have been described[1] in which the predominant clinical and radiologic manifestations are pulmonary with little or no systemic involvement. The following case report is an example of how appropriate clinical and pharmacological management can greatly improve the once dismal prognosis for this disease.

Case Report

A 50-year-old white male was referred to University of Mississippi Medical Center in Jackson, by his personal physician in November 1978, for evaluation of multiple pulmonary nodules and recurrent bilateral pleural effusion.

The patient began to have symptoms in April 1978, after a "flu-like" illness with subjective fever, nightsweats, malaise and a nonproductive cough. The patient received a pleura and lung biopsy in September, 1978, which revealed fibrosing alveolitis. The patient had a steadily worsening clinical course that included empiric treatment with prednisone, ethambutol and INH.

At the time of presentation to UMC the patient was noted to have a 60-pack-year history of smoking and the physical examination was essentially normal. Admission blood gases, chemistries, and blood counts were noncontributory. Routine urinalysis showed 60-75 RBC's, 1-2 RBC casts and 6-8 WBC's. BUN and creatinine were 16 and 1.1 respectively. Twenty-four hour urinalysis was significant for 700 mgs protein and creatinine clearance of 115 ml/min. Chest x-ray on admission revealed bilateral hilar adenopathy and multiple soft tissue densities throughout both lung fields as seen in Figure 1. The patient's outside hospital lung and pleura biopsy slides were reviewed by UMC pathologists and were interpreted as fibrosing granulomatous pneumonitis with necrotizing vasculitis consistent with Wegener's granulomatosis. Figure 2 is a photomicrograph of one of these slides showing vasculitis of small pulmonary artery seen in longitudinal section demonstrating plasma cell and lymphocyte infiltration of the artery walls with associated vascular wall necrosis. Sinus films were interpreted as normal. The patient refused a renal needle biopsy and was discharged with the impression that he probably had the limited form of Wegener's granulomatosis.

The patient was referred to an oncologist for cyclophosphamide chemotherapy and started on cytoxan 100 mg daily. The patient was followed with frequent chest radiographs and blood counts. The cytoxan dose was decreased periodically for coincidental upper respiratory infections as well as for thrombocytopenia and/or leukopenia. Figure 3 is a routine chest radiograph from March 1981, demonstrating almost complete resolution of the pulmonary process except for residual hilar lymphadenopathy and a retracted, scarred area in the left lateral mid-lung field. In October 1984, the cytoxan was discontinued completely after the chest radiograph had been stable for several years.

The patient did well clinically until November 1987, when a recurrence of Wegener's granulomatosis was diagnosed by chest radiograph as shown in Figure 4. Progression of COPD and recurrence of nodular densities in the foci of previous areas of disease are demonstrated. The patient was started

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, University Medical Center, Jackson, MS.

again on cytoxan 50 mg daily. In December 1987, the patient was admitted to his local hospital with complaints of chest pain and symptoms of acute bronchitis. He was treated with prednisone 20 mg daily, IV cephalosporins, nebulized beta agonists and advanced to cytoxan 100 mg daily. Follow-up chest radiographs showed improvement after this relapse.

The patient's clinical condition began to deteriorate again in June 1988. He was admitted again to his local hospital in August 1988, for treatment of the disease progression. He was treated with cytoxan 150 mg and prednisone 40 mg, both daily and discharged after an improved clinical course. During this hospital admission he had a room air PO2 of 88, creatinine of 1.4 and normal BUN. Prednisone was tapered off and the cytoxan was decreased to a 50 mg daily dose by January, 1989.



Figure 1. Chest radiograph made at the initial presentation demonstrates bilateral pulmonary nodular opacities.



Figure 2. Photomicrograph of a lung biopsy specimen demonstrating vasculitis of a small pulmonary artery consisntent with Wegener's granulomatosis.

Discussion

Wegener's granulomatosis is a type of noninfectious necrotizing granulomatosis that bears similarity to several other disease processes.[2] Lethal granuloma has a similar upper respiratory lesions but lacks pulmonary and renal components. Churg and Strauss' granulomatosis has many of the features of the Wegener's syndrome but differs in histologic details and in the prominence of allergic phenomenon.

In the limited form of Wegener's granulomatosis the lower respiratory tract displays the characteristic lesions, it lacks upper respiratory and renal involvement and has a better prognosis. A lymphomatoid variety is described having the characteristics of RES neoplasms but without lymphnode involvement and displays a prominent vasculitic component. This variant is systemic involving primarily the lungs, kidneys, skin and CNS but the paranasal sinuses are rarely affected.

Wegener's granulomatosis may present with an acute and fulminating course or more commonly be insidious in onset as in this case report. Major clinical findings in order of decreasing frequency include bilateral nodular and cavitary infiltrates, chronic sinusitis, mucosal ulceration of the nasopharynx and evidence of renal disease. Chronic sinusitis is the number one presenting complaint and less than half have pulmonary symptoms. Nonspecific complaints may include fever, malaise, weight loss, rhinitis, neuropathy, dyspnea, cough, pleuritic chest pain and hemoptysis. CBC may show anemia, thrombocytosis, leukocytosis, and eosinophilia. Routine urinalysis may show hematuria, proteinuria, WBC's and red cell casts in the urine sediment as demonstrated in this case.

Radiologic manifestations can be observed in the lung and paranasal sinuses in the usual case presentation. Sinus films may exhibit increased soft tissue density and destruction of bone. Lung lesions may be solitary but are more often multiple with indistinct outer walls and may resemble pulmonary metastasis. Solitary lesions may be confused with pneumonic consolidation. Cavitation of the opacities is not apparent in this case but occurs in 40-70% of those affected. Massive pulmonary hemorrhage and pleural effusion may occur rarely. Ab-



Figure 3. Chest radiograph demonstrating almost complete resolution of the vasculitic process after treatment with cytotoxic chemotherapy.

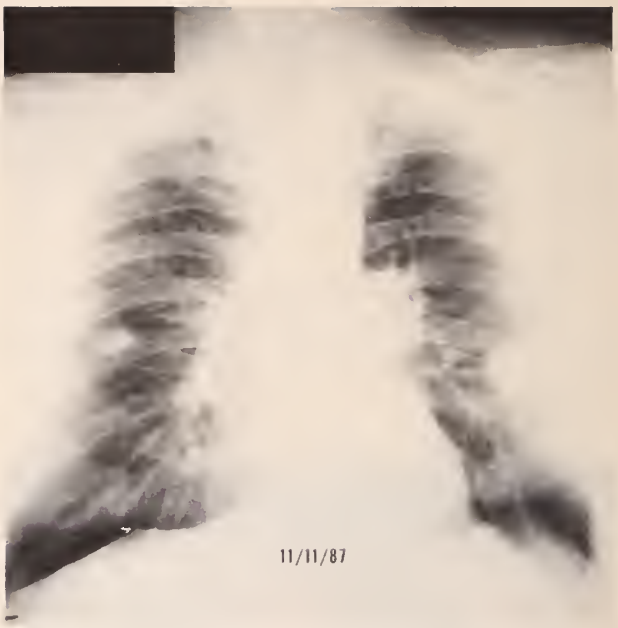


Figure 4. Chest radiograph shows recurrence of Wegener's granulomatosis in the foci of previous areas of disease.

normalities of the chest x-ray may clear almost totally with cytotoxic chemotherapy.

Renal involvement is characterized by hematuria, proteinuria and decreasing GFR. Eighty-five percent of Wegener's granulomatosis patients show some sign of renal involvement during the disease course but only 11% present with renal impairment initially. Cytotoxic chemotherapy may produce a very dramatic remission of renal involvement and may allow discontinuation of hemodialysis in patients with apparent end stage renal disease.

Diagnosis is confirmed by lung and renal biopsy. Renal biopsy may supply prognostic information but has limited value in treatment decisions. The average life expectancy without treatment is only five months and the one year survival is less than 20%. Steroids alone may double the life expectancy and are useful during acute exacerbations of the disease. Cytotoxic drugs such as cyclophosphamide may lead to remission and apparent cures. Of 85 patients treated at the NIH with cyclophosphmide, 93% achieved long term remission with a mean of 48 months and a range of 7 months to 13.2 years.[3] Lymphocytic leukemia is a complication of long term cyclophosphamide use. The usual cause of death in these patients is uremia or occasionally respiratory failure.

Summary

This case was a typical presentation for Wegener's granulomatosis with respect to the pulmonary and renal findings. Over the course of the past ten years this patient has done relatively well with only two major exacerbations requiring hospitalization. His renal function has apparently not been compromised to date. The finding of limited or no significant upper respiratory involvement is interesting in this case and is rather atypical for this disease. This may well represent a limited variant of Wegener's granulomatosis or possibly an excellent response of the Wegener's syndrome to cytotoxic chemotherapy. Finally, this case illustrates how appropriate clinical and pharmacological management has greatly improved the morbidity and mortality of this once uniformly fatal disease. ★★★

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Acknowledgements

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Obstetrics and Gynecology Grand Rounds
Clinical Case Management XVII:

Management of Toxic Shock Syndrome

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TOXIC SHOCK SYNDROME[1] (TSS) gained great notoriety in 1980 when the association of menses, tampons, and severe multisystem illness was recognized. Although first reported in children, the overwhelming majority of TSS cases occur in association with menstruation. Thus, the gynecologist must understand TSS in order to appropriately diagnose and treat this potentially life-threatening illness. TSS unrelated to menstruation may also occur.

The literature clearly antedates the cases reported in 1980. A constellation of symptoms which included systemic illness, high fever, prostration, scarlitiniform rash and a fine desquamation during convalescence was first reported in 1927. Similar syndromes were reported in 1942 in a patient with *Staphylococcus aureus* osteomyelitis, and again in 1960 and 1973 in patients with staphylococcal infections or abscesses.

Todd et al[2] coined the term "toxic shock syndrome" in 1978 and associated the disease with phage group 1 coagulase positive staphylococci. They postulated that the syndrome was due to a specific endotoxin. They described seven children presenting with "high" fever, headache, confusion, conjunctival hyperemia, a scarlitiniform rash, subcutaneous edema, vomiting, watery diarrhea, oliguria and a propensity to acute renal failure, hepatic abnormalities, disseminated intravascular cogulation, and severe prolonged shock. Interestingly, none of these children was menstruating although *S. aureus* was cultured from the vagina in at least one patient. In 1980[3] the CDC reported 55 cases of TSS in 13 states. These cases were mostly in young menstruating women. The association with *S. aureus* was again noted and the fatality rate was 13%.

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Epidemiology

A strong statistical association has been found between the use of tampons and the occurrence of TSS. While use of any tampon increases the risk of TSS, tampons containing polyester and carboxymethylcellulose were initially implicated in most cases of TSS. Recently, a significant association with polyacrylate rayon tampons has been found. The CDC confirmed the association with super-absorbent tampon use. Procter and Gamble removed the popular Rely® tampon from the market and ultimately, all tampons containing these substances have been withdrawn from the market. More recent data also supports the consensus that absorbency is strongly and independently associated with an increasing risk of menstrual-associated TSS. This association remains apparent in *each group* of tampons with a particular chemical composition.

Over 4,000 patients with TSS have been reported. The incidence of TSS is estimated to be 6 to 17 cases per 100,000 menstruating women per year. The disease has its peak onset on the fourth menstrual day, is less common in sexually active women, has no association with the amount of menstrual flow, and is not related to any other known feature of lifestyle. No seasonal distribution of cases has been discerned. A disproportionate number (97%) of cases of menstrual TSS have occurred in non-Hispanic whites. The primary reason for the discrepancy is likely due to a difference in patterns of catamenial product usage between black and whites.

Nonmenstrual TSS can be associated with a wide variety of infections caused by *S. aureus*, including skin, bone, and soft tissue infections. Primary bacteremia which has occurred in postpartum women with *S. aureus* infections of the vagina, breast, and cesarean section incisions may also lead to TSS. In recent years one-third of cases has been nonmenstrual. Five to 10% of reported cases are in men. The mortality rate for inexplicable reasons is twice as high in men as in women.

Pathogenesis

The common thread in all cases of TSS is colonization or infection with coagulase-positive betalactamase producing *S. aureus* of bacteriophage group 1. Because *S. aureus* bacteremia is uncommon in TSS and because TSS resembles other toxin-mediated diseases, one or more *S. aureus* toxins have been implicated. Indeed, Bergdoll[4] and Schlievert[5] independently isolated a protein molecule associated with TSS. While this protein was named entertroxin F by Bergdoll and pyrogenic exotoxin C by Schlievert, the proteins were found to be identical. In 1984 the term "toxic shock syndrome toxin-1" (TSST-1) was adopted to describe the toxin.

The role of specific tampons in the pathogenesis of TSS was determined by measuring the effect of chemical composition and absorbency on the manufacture of TSST-1 in vitro. Tampon fibers that have high absorbency for water are often efficient ion-exchangers, particularly for magnesium. Low magnesium concentration allows greater production of TSST-1 by *S. aureus*, while high concentration suppresses production. Magnesium is unique among the ions and trace elements in its effect on TSST-1. Tampons associated with a high risk of TSS contain fibers that bind magnesium and thus allow increased production of TSST-1.

When menstrual flow is greater, blood and cellular *detritus* provide excess magnesium in the vagina even after tampon fibers have been saturated with the ion. As menstrual flow diminishes, the relatively smaller amount of magnesium is taken up by the tampon, leaving the microorganisms in a low magnesium environment with consequent high toxin production. Similarly, the lower risk in sexually active women may be related to the high magnesium content of human semen. Other staphylococcal toxins may cause TSS. They produce clinical and histopathologic findings and mortality rates similar to TSST-1-positive isolates.

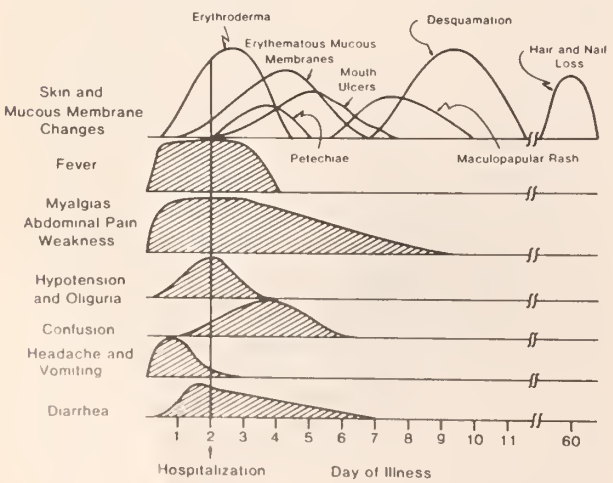


Figure 1. Composite drawing of major systemic, skin, and mucous membrane manifestations of toxic shock syndrome (Reprinted with permission Chesney PJ, et al: Clinical manifestations of toxic shock syndrome. JAMA 246:743, 1981. Copyright American Medical Association.)

Pathophysiology

The toxin has both a direct effect on specific tissues as well as a systemic action. *Staphylococcus aureus* toxins cause direct cell membrane damage and activation of the complement cascade leading to the release of a variety of vasoactive substances such as histamine, serotonin, and bradykinin. These inflammatory substances promote endothelial damage, vasodilatation, and increased capillary permeability. Alteration in permeability results in leakage of fluid from the circulation and therefore decreased perfusion leading to tissue hypoxia and metabolic acidosis. Decreased left ventricular contractility may lead to renal shut-down and central nervous system dysfunction. Gastrointestinal, epidermal, and mucous membrane manifestations are caused by direct toxin damage.

Clinical Presentation

The diagnosis of TSS is based on presentation, on physical examination and on laboratory data as outlined by the TSS case definition. The patient presenting with TSS will have a one to four-day prodrome consisting of fever, nonrigorous chills and myalgias, primarily involving the proximal limbs, and abdominal, lumbar, and cervical muscles. These muscles are frequently tender to touch. Most patients have malaise, arthralgias, diarrhea or loose stools, emesis, headache, sore throat, and orthostatic dizziness. Most patients present on the second day of illness. The time sequence of the typical signs and symptoms is shown in Figure 1.

TABLE 1

COMMON LABORATORY FINDINGS IN TOXIC SHOCK SYNDROME[6]

Polymorphonuclear cells	> 90% of total WBC
Total lymphocytes	< 650/mm³
Total serum protein	< 5.6 mg/dl
Serum albumin	< 3.1 gm/dl
Serum calcium	< 7.8 mg/dl
Serum creatinine	> 1.0 mg/dl
Serum bilirubin	> 1.5 mg/dl
BUN	> 20 mg/dl
SGOT	> 41 U/L
Serum cholesterol	≤ 120 mg/dl
Platelet count	< 150,000/mm³

Physical Examination

Dermatologic manifestations of TSS by definition are present in all cases. The classic rash is a sunburn-like, blanching, nonpruritic, macular erythroderma. While the rash is often diffuse, it may be localized to the trunk, extremities, inguinal area, or perineum. The rash is usually present with the initial presentation and fades in about three days. It can be subtle and missed without adequate light.

Other cutaneous manifestations include bullae, petechiae, a papulopustular rash, and areas of hyperasthesia. Mucous membranes and conjunctivae are usually hyperemic and a strawberry tongue is frequently described. Brawny nonpitting edema of the face, eyelids or extremities may be seen. All surviving patients develop desquamation, mostly involving the hands and feet, between 5 and 12 days after the initial rash has resolved. Some patients also have delayed patchy alopecia or fingernail loss.

Hypotension or orthostatic changes in blood pressure are seen in all patients with TSS. Hypotension is secondary to a combination of gastrointestinal fluid losses, vasodilation and generalized alterations in vascular permeability. Sinus tachycardia is commonly present, and other ECG changes such as premature ventricular contractions, first degree heart block and ST segment and T wave changes have been noted. Myocardial failure may result.

Vomiting and/or diarrhea are present during the course of the illness. Diffuse abdominal tenderness may be present but signs of peritoneal irritation are absent. Some patients may develop an ileus. Hepatomegaly may be seen in some patients. Renal dysfunction manifested by oliguria is common. Although acute tubular necrosis most often presents with oliguria, occasionally high output renal failure is present. These changes may follow severe hypotension.

A malodorous cervical discharge may be noted in addition to menstrual flow. Vulvar hyperemia and tenderness, and vaginal ulcerations are often present. Bilateral adnexal tenderness may also be present.

Headache is present in most cases. Nonfocal neurologic abnormalities such as disorientation, confusion, hallucination, and agitation may occur but generally resolve within several days. Fatal cases are associated with cerebral edema. Because of a stiff neck, a lumbar puncture is occasionally indicated. Examination of cerebrospinal fluid will usually reveal normal glucose and protein concentration but often a slightly elevated white count.

Laboratory

Laboratory findings are often nonspecific. The white blood count is elevated with a large percentage of immature neutrophils. Mild thrombocytopenia is common. A more pronounced thrombocytopenia may be due to disseminated intravascular coagulation, increased consumption, or decreased production. The hematocrit in most patients with TSS is normal with a normochromic, normocytic red cell pattern.

Respiratory alkalosis and metabolic acidosis, oliguria or anuria, elevated BUN and creatinine levels are common. Liver function tests may be elevated twice normal values. Common findings on chemistry studies include: hyponatremia, hypocalcemia, hypoalbuminemia, hypokalemia, and hypomagnesemia (see Table 1).

Differential Diagnosis

As there is no definitive test for TSS, the diagnosis is made by clinical criteria and frequently may be confused with other illnesses. The differential diagnosis of TSS includes: (1) staphylococcal scalded skin syndrome, (2) streptococcal scarlet fever, (3) Rocky Mountain spotted fever, (4) leptospirosis, and (5) Steven-Johnson syndrome. Kawasaki disease, staphylococcal scalded skin syndrome, and streptococcal scarlet fever can be distinguished from TSS as they are predominantly diseases of children and do not present with hypotension. Rocky Mountain spotted fever also does not present with hypotension and the rash is easily separable clinically. Leptospirosis is a disorder with a different epidemiology than TSS and rarely severe in presentation or course. Steven-Johnson syndrome, on the other hand, shares several features in common with TSS and must be carefully considered in the differential diagnosis.

Treatment

The important initial step in treatment is recognition. Vigorous fluid resuscitation with crystalloid is the mainstay of therapy. Patients often require 12 to 15 liters of fluid per day to maintain adequate tissue perfusion. Rapid and large volume fluid replacement may occasionally result in congestive heart failure. Because of the life-threatening nature of hypovolemia in patients with TSS, these patients should be monitored in intensive care areas.

Vasopressor drugs may be required when tissue perfusion is inadequate despite adequate fluid replacement. Dopamine is preferred because of its dose-dependent, alpha-adrenergic, and beta-adrenegic effects. Myocardial contractility and cardiac output increase without increasing myocardial oxygen consumption.

The source of *S. aureus* infection or colonization must be identified. In patients with menstrual-associated TSS, a thorough vaginal examination should be performed and tampons, diaphragms, and other vaginal contraceptive devices removed. In those with nonmenstrual-associated TSS, careful inspection of postopertive wounds for evidence of infection is mandatory. Infected sites should be completely debrided and drained. Cultures of mucous membranes, discharges, and foreign devices are essential to document *S. aureus*.

The use of antibiotics will not alter the course of established TSS. Administration of appropriate antimicrobial agents will decrease the recurrence rate and will obviously benefit the rare patient with *S. aureus* bacteremia. A penicillinase-resistant semisynthetic penicillin, such as nafcillin or oxacillin, is recommended at a dose of 1 or 2 grams intravenously every 4 hours for 10-14 days. A first generation cephalosporin or vancomycin may be used in patients with penicillin allergy. Sequestered infections, such as osteomyelitis, may require more prolonged therapy. Corticosteroids, when given in the first 48-72 hours, may decrease the severity of the illness. However, no prospective randomized evaluations of corticosteroid therapy in TSS have been done.

Many patients will require an indwelling urinary catheter to monitor urine output, an intraarterial catheter to monitor blood pressures continuously, and a Swan-Ganz catheter to determine hemodynamic parameters. Supplemental oxygen is given as needed and ventilatory support is occasionally required in patients with respiratory distress.

Adult respiratory distress syndrome (ARDS) is a common complication. The diagnosis is made on the basis of a progressive hypoxemia, a normal pulmonary capillary wedge pressure, diffuse infiltrates on chest x-ray and decreased pulmonary compliance. These findings are associated with increased capillary permeability, which leads to extensive fluid extravastation into the pulmonary interstitium. The cornerstone of treatment involves intubation and ventilatory support to maintain adequate gas exchange at nontoxic inspired oxygen concentration. Positive end-expiratory pressure (PEEP) is often necessary to accomplish this goal. Even in the face of overt pulmonary capillary leakage, intravenous hydration must be continued to maintain systemic perfusion.

Prevention of recurrence requires education of the patient. Recurrences occur within the first two to three months following the initial episode in 25-30% of patients. Recurrence can be minimized by the use of anti-staphylococcal antibiotics at the time of the initial infection and subsequent avoidance of tampons. Those choosing to use tampons should be advised to use them intermittently throughout menses, perhaps alternating with napkins, to avoid them on the light days of their flow and to change tampons frequently. Patients who use tampons should be familiar with early symptoms and signs and should be instructed to remove the tampon and seek medical care if an illness associated with fever, dizziness, rash, or diarrhea develops.

The use of contraceptive pills may decrease the risk of developing TSS. In contrast, barrier forms of birth control such as the diaphragm and contraceptive sponge should be used with caution as they may allow TSS-associated bacteria to grow. Women who have had recent episodes of vaginitis appear to have substantially increased risk of developing TSS.

In summary, TSS is an acute febrile illness characterized by hypotension, rash, desquamation, and multisystem illness. While most common in menstruating women, TSS also occurs in men and nonmenstruating women. The disease is caused by one or more toxins produced by the *S. aureus* organism. Treatment consists primarily of fluid resuscitation and supportive care. Anti-staphylococcal antibiotics are indicated primarily to reduce the rate of recurrence in menstrually-related cases. In wound-related TSS, antibiotics are necessary to treat the primary wound infection and prevent recurrent disease. Currently, the case fatality rate is less than 3%. The major long-term complication of survivors is the risk of recurrence, especially in women who wear tampons. ★★★

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Acknowledgement

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SPECIAL ARTICLE

HIV Testing in Mississippi: Questions Doctors Ask

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EDITORIAL NOTE: THIS ARTICLE *was written by a physician for physicians. It is not intended to take the place of competent legal advice. Physicians are advised to consult with their attorneys about specific situations if there is a question of legality. The following pointers are intended to serve as guidelines, and to advise physicians about laws and regulations governing HIV testing in general.*

Is there a law requiring a physician to obtain written informed consent before testing a patient for HIV infection?

No. There is no federal or state law, and no Department of Health regulation specifically addressing consent for HIV testing. Although there are state laws governing such consent in several states, there are none in Mississippi, and none are recommended by the health department.

Then can a physician test a patient for HIV infection without the patient's consent?

No, no more than a physician can perform any procedure on a patient without some form of consent. Testing for HIV infection is no different from any other laboratory test or procedure in this regard. Everything we as physicians do to a patient has to be with the patient's consent. That consent may be specified in writing, as is often the case for surgical procedures; consent may be obtained verbally; or the consent may be implied, as is the case when the physician says, "Let me examine your throat," and the patient opens his or her mouth and says, "Ahh."

So does a physician have to obtain written informed consent before doing HIV testing on patient or not?

It depends on the situation and circumstances. In many cases, implied consent or verbal consent would probably be fully appropriate. In some circumstances, specific written consent might be a good idea, not to comply with any law or regulation, since there are none, but to protect the physician from possible liability and exposure to lawsuit.

Implied Consent. Few would quarrel with the idea that a patient who comes to a physician complaining of weight loss, lymphadenopathy, and fever, with a history of intravenous drug abuse or homosexual activity, would be giving implied consent to HIV antibody testing, since this would be a part of the workup of the patient's complaint. Similarly, if the physician advises a patient with tuberculosis that he or she routinely tests for HIV infection in all tuberculosis patients (something that all physicians should do), and the patient does not specifically object, consent would be implied.

Verbal Consent. If there is any question that HIV antibody testing is an integral part of the care of the patient, the physician should, at least, ask the

Dr. Thompson is chief of the Bureau of Preventive Health Services of the Mississippi State Department of Health. Mr. Sharp is special assistant attorney general assigned to the State Department of Health.

patient whether he or she objects to being tested for HIV infection. Such verbal consent is often obtained for a variety of procedures.

Written Consent. From the standpoint of exposure to liability, written consent should probably be obtained for HIV testing (1) if there is significant doubt as to whether the patient would choose to have the test performed or not; and (2) in situations where HIV testing is not a part of the diagnostic workup of the patient's condition. For example, the physician might wish to test a patient scheduled for surgery for HIV infection because of history of high risk behavior and concern about acquiring infection intraoperatively. Such testing is entirely appropriate, but the physician would be well advised to obtain written consent, so as to be able to document that consent was obtained in case the patient should later object.

What if the physician asks the patient to consent to HIV antibody testing and the patient refuses?

Then the physician should not perform HIV testing. The physician may also choose not to continue caring for the patient. If a potential operative candidate refuses to consent to HIV testing that the physician believes is appropriate, the physician can in most circumstances choose not to operate. The exception, of course, would be emergency situations. Likewise, a physician whose TB patient refuses HIV testing would be within his or her right to refuse to continue to care for the patient if the physician believes that he or she cannot do so adequately without knowledge of the patient's HIV infection status, since that status would affect appropriate therapy for tuberculosis.

Is there any way a person in Mississippi can be tested for HIV infection without consent?

Yes. The State Department of Health has the legal authority to test any person for any sexually transmitted disease if there is reason to believe the person is infected or has been exposed to such infection. This authority has been used for other sexually transmitted diseases and can also be exercised for HIV infection if needed.

Suppose I have tested a patient for HIV infection and he or she is positive? Is there a law that prevents me from telling other physicians who care for the patient? Do I have to have the patient's consent to inform other physicians and health care workers?

There is no law restricting appropriate sharing of information among medical personnel providing care to a patient who is HIV infected. In fact, some laws specifically *require* any health care provider who knows that a patient is HIV infected (or has other blood-borne disease) to advise other health care providers to whom the patient is transferred or referred of the presence of such infection. The patient's consent is *not* required for such notification. Of course, only health care personnel who have a reasonable need to know the patient's infection status should be so advised. This would clearly include health care workers who will be starting IV's on the patient. It would clearly not include the dietary staff who only deliver food trays to the patient.

What about emergency workers who provide care to a patient at the site of a wreck or other serious bleeding trauma?

Here again, notifying the emergency worker of the presence of HIV infection or other blood borne disease is not only authorized, but required. In this circumstance, the requirement applies to the hospital or institution to which the patient is taken, since these will be emergency room patients, not office patients. The statute specifically excludes physicians from the requirement (not something that was suggested by the Department of Health). The requirement is that the hospital or other licensed facility to which such a patient is taken must notify the emergency worker who had a percutaneous or mucous membrane exposure to blood or blood-containing body fluids of the presence of HIV infection or other blood-borne disease (those specified by the Board of Health and listed earlier) if the facility is aware of it. All the emergency worker must do in order to be notified is to advise the facility in writing of the exposure.

What about funeral directors?

State law requires that physicians, hospitals, and others delivering a body to a funeral director for postmortem care advise the funeral director or others receiving the body of the presence of several conditions, most of them not blood-borne, specified in the statute (infectious hepatitis, tuberculosis, any venereal disease, and AIDS) and any other disease designated by the State Board of Health in its rules and regulations as a disease transmissible through blood contact for which precautions are necessary in embalming or otherwise handling dead bodies infected with the disease or its causative agent. These are:

Anthrax
Hepatitis B
Hepatitis Non-A, Non-B
Human Immunodeficiency Virus (HIV) Infection
Malaria
Plague
Rocky Mountain Spotted Fever
Syphilis
Tularemia
Viral Hemorrhagic Fever

Such a body must have a red tag attached, preferably to the great toe, specifying "blood and body fluid precautions."

What about a physician who has a patient who the physician learns is HIV infected, but who will not allow the physician to tell his or her spouse or other sexual partner?

The physician is probably safe in directly notifying the spouse or known sexual partner under the physician's "duty to warn." However, the physician also is allowed under state law to report to the State Department of Health any patient with a communicable disease who, in the physician's opinion, is not complying or will not comply with appropriate precautionary measures to prevent transmitting the disease to others. This would certainly fit the situation of a patient who is unwilling for his or her spouse or sexual partner to know of the patient's HIV infection. In such circumstances, health department staff would advise the spouse or sexual partner of the patient's infection.

Are there any legal restrictions on HIV infection testing in Mississippi?

Yes. The State Board of Health has adopted some regulations governing HIV antibody testing, primarily to regulate the activities of non-physicians. The requirements are:

No individual or agency can collect blood for HIV antibody testing in Mississippi without some provision for confirming initially positive results on a screening test (usually the ELISA) by reliable second level test, such as the Western Blot.

Appropriate pre- and post-test counseling is required for all HIV testing. The nature of this counseling is not specified in the regulation, and it was the understanding of the Board of Health in enacting the regulation that a physician was capable of providing adequate pre- and post-test counseling.

Persons performing testing for HIV infection are prohibited from advising a patient that the patient is HIV infected until second level testing has confirmed the infection.

These regulations were aimed primarily at "free-standing" testing centers and laboratories in which specimens were being collected with little or no involvement of a physician. Basic good medical practice would dictate that physicians would already be complying with the intent of these regulations. Outside these regulations, which were primarily intended to prevent abuses by non-physicians, there are no specific regulations regarding HIV testing, nor are any planned.

What about reporting HIV infection to the health department?

Confirmed HIV infection is reportable to the State Department of Health under the *Rules and Regulations Governing Reportable Disease*. The reason for this reporting is so that the health department can do contact follow-up (partner notification) on all HIV infected people identified, as a means of reducing the spread of HIV infection. AIDS itself has been reportable since 1983; HIV infection became reportable in August 1988.

Do I report patients with only positive ELISA's?

No. The regulations specify that confirmed infection, consisting of repeatedly reactive ELISA testing plus second level or confirmatory testing with an appropriate procedure such as the Western Blot, is reportable.

What about patients whose ELISA's are repeatedly reactive, but whose Western Blots are negative?

Such patients are not reportable. They are probably not infected; that combination of results normally indicates a false positive ELISA.

What about ELISA positive but Western Blot "indeterminate" patients?

These patients should not be reported as HIV infected. Only patients who have repeatedly positive ELISA *and* a reactive Western Blot or otherwise positive "confirmatory" or second level test should be reported.

What happens when I report a case of HIV infection to the health department?

The case will be logged into our tracking system and assigned to a disease investigator in the area

where the patient lives. The investigator will contact the physician who reported the case to learn what the physician has already told the patient and what contact notification the physician may have already done. Although investigators may contact the physician initially by telephone to arrange an appointment, the investigator will visit the physician in person and present proper identification. Only when the physician and disease investigator already know each other and have no questions of the identity of the investigator do investigations occurs exclusively by telephone. If there is any doubt, ask to see identification.

After talking with the physician, the disease investigator will meet in person with the infected individual to question about sex and needle partners. The investigator will then directly contact all identified partners, and without revealing the name of the person who identified them, advise them that they have been exposed to HIV infection and may have become infected. They will be offered counseling and testing (initial results indicate that 90% or more of contacts located choose to be tested for infection).

Won't the lab report HIV infections to the health department? Do I have to report as well?

Laboratories are required to report HIV infection, along with any other reportable conditions, but the physician is also required to make a report. We are able to identify dual reports, and expect to get many such.

What is the penalty for failing to report HIV infection to the health department?

State law specifies that a physician who fails to report according to regulations a case of HIV infection or AIDS will be reported to the State Board of Medical Licensure.

Although the Board of Medical Licensure would be unlikely to take any action based on a single incident of a physician's failing to report, if a physician failed to report consistently, the Board could use such failure to report as grounds for suspension or revocation of license, as specified in state law.

Equally important, a physician who fails to report a case of HIV infection might be exposed to considerable legal liability if the patient subsequently infected other unsuspecting persons. Had the physician reported that patient, those unsuspecting persons might have been advised of the risk and avoided further exposure. The original physician would clearly be guilty of neglect of his or her "duty to warn" indirectly, through the health department.

★★★

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What Can Physicians and Medical Societies Do?

THERE ARE a number of actions physicians can take, both individually and through their medical societies, with respect to third-party payors:

The antitrust laws do not prohibit any conduct by an individual physician or medical group, including refusing to participate in any third-party payor's program, as long as the conduct represents an *individual decision* based on the physician's or group's independent judgment and is not based on any understanding with other physicians about whether to participate.

As noted above, a fully integrated group practice is considered a single entity for antitrust purposes. Independent action by such a practice is unilateral conduct which does not implicate the antitrust laws. A merger of two medical practices into a single practice is full integration.

Sometimes, physicians who remain competitors for some purposes will form a joint venture to practice more efficiently or to offer a service that they could not offer as effectively without the venture. Ventures of this nature involve partial integration of the physicians' practices. Examples include some IPAs, PPOs, and free standing clinics, surgicenters, or laboratories. From an antitrust perspective, most agreements involving partially integrated ventures are analyzed under the rule of reason — not the *per se* rule. This is because the agreements are not naked restraints of trade — but rather ancillary to the procompetive purpose of the venture.

Integration

The principal antitrust concerns with partially integrated practices are that (1) they actually be integrated, (2) they be formed for legitimate purposes, (3) they not include too large a percentage of competing physicians or of the physicians of a particular speciality in an area, and (4) they not prevent the formation and operation of similar entities.

Actual Integration

There are many indicia of integration, including (1) significant capital contributions from the physicians to establish the integrated venture; (2) risk sharing by the physicians — sometimes through a capitation reimbursement mechanism or a fee withhold; (3) establishment of peer review, utilization review, and quality assurance programs by the group; and (4) centralization of business functions, such as administration, claims processing, billing, personnel, purchasing, and marketing. The greater the degree of integration, the more likely that any agreement among the physicians relating to the operation of the venture will be "ancillary" to a legitimate purpose rather than a "naked" restraint of trade.

Legitimate Purpose

Government antitrust enforcers will have concern about a partially integrated venture if the venture was formed simply to increase the level of physician fees or effectuate an anticompetitive purpose such as keeping non-fee-for-service medical plans out of the area. The group's documents should indicate a procompetitive purpose — to deliver medical services more efficiently or to allow the marketing of a product that the venturers could not offer without the venture.

Percentage of Area Physicians Participating

If the partially integrated group contains too large a percentage of all competing physicians in the area or of the specialists in a particular field, it could hinder similar groups from finding enough participating physicians. In the case of a full merger between presently existing practices, legal advice should be sought if the merging groups would have 20% or more of the market after the merger. In the case of partially integrated ventures, legal advice should be sought if 35% or more of competing physicians in the area would be participants.

This is the second in a series of three articles reprinted from a brochure by the American Medical Association.

Impending Competition from Other Groups

If most of the physicians in an area are members of a single group, such as a PPO, and cannot or would not participate in competing plans or groups, then other groups may not be able to become viable competitors. This is one reason why the percentage of physicians in any one group is important. In addition, it usually is not a good idea for participating physicians and their plans to enter agreements that prohibit member physicians from participating in other plans.

Establishing a joint venture or other partially integrated practice can improve the ability of physicians to deliver higher quality health care more efficiently. Moreover, partial integration may enable physicians to deal collectively with third-party payors with reduced antitrust risk. It should be emphasized, however, that conduct by partially integrated physician ventures is not immune from antitrust scrutiny. Rather, it will be subject to the rule of reason. Before determining whether and how to integrate, physicians should obtain legal advice from a health-antitrust attorney.

Medical societies are in a unique position in which to discuss issues with third-party payors. Medical societies represent physicians on all issues — economic, educational and ethical. Medical societies have continuing relationships with the groups most responsible for the issues facing physicians today: the legislatures, government agencies, and payors. Examples of what medical societies can do include:

The antitrust laws do not prohibit medical societies from asking legislatures, courts and other government agencies in good faith for any actions — as long as there is no threat that the physicians as a group will not participate if their requests are denied.

The antitrust laws do not prohibit medical societies from advising on the meaning and consequences of proposals or retaining an expert for these purposes as long as the decision whether to accept particular proposals is left to individual physicians or group practices. Physicians are permitted to learn as much about third-party payor proposals as possible before they decide whether to participate.

The antitrust laws do not prohibit medical societies from expressing the concerns of their members about proposals to third-party payors and submitting recommended changes as long as there is no threat of concerted action if the recommended changes are rejected.

The antitrust laws do not prohibit medical societies, either directly or through a consultant, from expressing to payors the views of their members on issues not relating to fees. These issues include the procedures and services to be covered by the payor, the amount and type of claims-forms required, or utilization and peer review procedures. A local medical society can be quite effective in representing its member physicians on these and related issues as long as it avoids threats of boycotts.

The antitrust laws do not prohibit medical societies from expressing the views of their members that particular fees and reimbursement levels are too low. A medical society may *not* suggest, imply or threaten that its members will refuse to participate in the plan unless reimbursement is increased. Moreover, a society runs a substantial risk by suggesting specific fee levels if the members subsequently demand that fee or threaten to departicipate if it is not met.

Depending on the circumstances, programs of this type described above can, and have, given independent physicians useful leverage in dealing with third-party payors. But they should be conducted only with the assistance of an experienced health-antitrust counsel. Physicians should be vigilant to assure that the discussions do not stray to agreements as to appropriate fee levels. And groups of physicians should never threaten a payor with group nonparticipation if the payor refuses to accept physician demands.

Several physician unions have claimed that they are more effective than medical societies in representing the economic interest of physicians. They assert that unions are exempt from, or at least receive more lenient treatment under, the antitrust laws. Thus, they state or imply that they can engage in negotiating activities from which medical societies are precluded by the antitrust laws.

These claims are false! The antitrust laws apply fully to the activities of physician unions. Indeed, the Supreme Court has upheld findings of antitrust violations by a union of dentists. Physicians who believe they can engage in anticompetitive conduct because they are acting through a union face severe consequences.

There is a labor exemption from the antitrust laws. However, it applies to non-supervisory *employees* in collective bargaining with their employer. There is no requirement that the collective bargaining be done by a union. Both medical societies and unions can lawfully represent non-supervisory employed physicians in collectively negotiating fees. Neither medical societies nor physician unions may represent independent physicians in jointly negotiating or setting fees. ★★★

PHYSICIANS

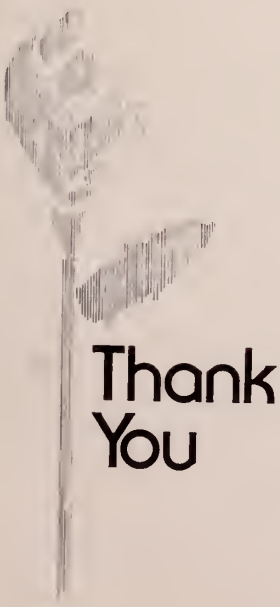
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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

AMA Optimism

The American Medical Association has just completed its interim meeting of the 1989 year. Even after twenty sessions, as a member of the Mississippi Delegation to AMA, I continue to be fascinated by the process in which a voluminous amount of information is studied, debated and a consensus is determined in just three to four grueling and intense days.

The medical students section (representing the majority of medical schools in the country), the resident physician section, the young physicians section (those 40 and under or less than five years in practice), the hospital medical staff section, and the section on medical schools all meet the three days before the opening of the AMA House of Delegates. Following these section meetings, well over a thousand representatives participate in reference committee hearings and/or House of Delegates floor debate and discussion concerning a voluminous number of board reports, council reports and resolutions. I continue to be impressed by the knowledge level of the members of the AMA House of Delegates. There are those in the house who are well recognized for their expertise in legislative and governmental affairs, scientific and public health issues, third party reimbursement, and liability insurance questions.

Every House of Delegates seems to have a personality of its own. This particular House, in that respect, was no different. The predominant theme seemed to be one of relative conservatism and with increased interest in issues of public health. Even though AMA policy has always been to counter the tobacco industry and to eliminate smoking, this year the attack seemed to be more vicious, more emotional and with improved data concerning the enormous disease production and risk associated with smoking. The alcohol and other drug abuse problems were labeled as the most important, and in fact, the number one health problem confronting our nation. The purchase of alcohol with AMA funds was condemned with a much stronger voice than in past years. The problems of AIDS, in all of its related aspects, was debated at length in a very extensive board report that was revised by the reference committee and revised again on the floor of the house. Seventeen extensive monographs concerning all aspects of AIDS published by the Council on Scientific Affairs were reviewed by the Reference Committee and the House of Delegates. These public health and scientific affairs issues consumed the majority of the time of the delegates. This reference committee was very admirably chaired by one of our own Mississippi delegates, Dr. Carl Evers of Jackson.

Issues of equal importance like the Resource Based Relative Value Scale and its ultimate outcome were debated, as was the present state of the U.S. health care system. We were privileged to hear representatives from four foreign health care systems give extensive testimony concerning their systems and provide comparisons with the U.S. health care system. I think it is worthy to note, that to-a-person they all agreed with two things, that

(Continued on page 30)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
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JANUARY 1990

1990 — A Time For Change

For sometime now we have seen a steady decline in the number of applicants for medical schools. The average numbers have dropped from one admission out of several hundred applicants, and even one out of several thousand applicants in some cases, to a national average of one out of less than two applicants. Our own University of Mississippi medical school is near the national average. We, here in Mississippi, have been able to keep an excellent group of students each year with stellar qualifications and have been able to consistently turn out highly qualified professionals. How long can this trend continue without some change in the quality of the product? Even now our own medical school has cut its entering class size from 150 students to 100 students. This is related to demand for doctors, number of applicants, and economics of the teaching profession.

The causes of the trend away from medicine, as you are aware, are complex and multifactorial. I will address a few of these problems and give my suggestions as to how they can be improved or even solved.

(1) *Attitude Toward Medicine* — Instead of telling people, children, and potential medical students all the problems we have and why we don't think medicine is the career they should choose, why not tell them the joy and satisfaction we find in practicing medicine? These far outweigh our day to day frustrations; otherwise, we would be doing something else.

(2) *Government Intervention* — I view this as a challenge for all of us. Most all professions have some government involvement and we are no exception. With medical expenses heading toward 19% of the gross national product by the year 2000, it is no wonder that the government feels that it should be involved. It is up to us to be active and forceful in our persuasion that we have the best medical care system in the world and will do whatever it takes to preserve it.

(3) *Malpractice* — We are certainly a litigious society. If we stay abreast of changes in medicine by persistence in our medical education, practice better medicine, have good peer review, work toward better rapport with our patients, and stay in there and fight, then we can expect to hold our own with insurance companies, lawyers, and lawsuit-prone patients. We have made tort reform changes in the legislature and will continue toward this goal. I was proud of my 23% malpractice premium reduction this year and feel that I had a part in influencing that by the work we did on tort reform, and through public education.

(4) *Cost of Medical Education* — One of the obvious reasons that prospective students shun medicine as a career is the inordinate amount of money required for education. With the prolonged schooling and residency training now in effect, it only gets worse. We need to encourage more scholarship programs for students so that they can find adequate financial assistance without either having to be rich, or having to take a lifetime to pay for their medical education. Many medical schools have scholarship programs that assist most or all of their students. We are not able to assist that many entering students with high grade or ongoing scholarships and consequently lose some very good students to other medical schools. The students will go where they can lessen their financial burden, and you certainly can't blame them for that. Perhaps through more private and industrial involvement in the future, we will be able to help more students through their training years.

(5) *Content and Length of Education* — This is a conjoint problem with the cost of education. This is an area where real change can and should be made. This is where a vision of the future associated with real action can make a difference in the nineties.

Attempts have been instituted to shorten medical education in the past. Harvard was one of the first schools that tried sending some students into medical school after three years of college. This was a brave new approach at that time, but it did not work out, and I understand has since been stopped. Now there is a new and more promising experiment in the works which combines the first one or two years of residency training with the last year or two of medical school. This has great potential and is being

tried at the University of Kentucky on a limited basis. We'll keep an eye on it.

Licensure examinations and specialty board examinations seem to be the driving force in our medical education system. Everyone has to know a certain number of the right facts in order to practice medicine. Changes in our exam structure could make a difference in the educational makeup of our medical school curricula and in so doing turn out better physicians with less time spent doing so. Medical school changes in curricula alone cannot effect a significant change in the long haul unless the licensure boards work with them.

In some areas of medical education, I believe, a more integrated system with anatomy, physiology, pathology, pharmacology, physical diagnosis, and clinical care being taught at the same time for a specific body system or disease process would be better than what we have now. I would like to see a greater emphasis on wellness and the prevention of disease than is prevalent in our existing educational system. We present-day physicians are steeped in disease processes, but shouldn't we focus more on good overall health and how to keep it? As Pogo would say "We have met the enemy and he is us."

I look forward to being a "physician of the nineties" and hope that we can all work together for changes that will make a big impact on the health of future generations.

JOE JOHNSTON, M.D.
Associate Editor

Medico-Legal Brief

Regulations Prohibiting Abortion Counseling Held Unconstitutional

Regulations promulgated under Title X of the Public Health Service Act prohibiting counseling or referrals for abortion services violated the constitutional right to reproductive choice, a federal appellate court for Massachusetts ruled.

The state and various associations brought an action seeking a declaration that the new regulations were unconstitutional. The federal trial court found that the regulations either exceeded the statutory authority of the Secretary of Health and Human Services or infringed on constitutionally protected activities and enjoined their enforcement of application.

On appeal, the federal appellate court said that the government was not free, under the guise of protecting maternal health or potential life, to intimidate women into continuing pregnancies. The court said that the regulations showed that they wholly subordinated constitutional privacy interests and consensus as to maternal health in order to deter a woman from making a decision that was hers to make, along with her physician.

Under the regulations, all clients were required to be furnished with a list of available providers that promoted the welfare of the mother and unborn child. The court said that this requirement aimed at persuading a woman to opt for childbirth over abortion by presenting limited and biased information and making the decision to abort more difficult. It also forced an attending physician to endorse providers that might be out of step with the needs of the particular woman. The court said that the regulations forced provision of incomplete and skewed information and withholding of requested and possibly medically advisable information. Thus, the regulations imposed substantial delay and additional costs on a woman who desired to terminate her pregnancy. They also might endanger a woman by pushing the time of abortion into the second trimester of pregnancy. The court said that the regulations went beyond a mere refusal to fund and interfered with the decisional process by dictating what information a woman could receive and intruding in the relationship with her physician. The court affirmed the trial court's judgment and enjoyed enforcement or application of the counseling or referral provisions of the new regulations.

The state also argued that the new regulations infringed on the First Amendment. The court said that through the medium of funding, the Secretary had attempted to limit public discussion on abortion rights, which restriction was a violation of the First Amendment. — *Commonwealth of Massachusetts v. Secretary of Health and Human Services*, 873 F.2d 1528 (C.A.1, Mass., May 8, 1989; as amended, May 8 and May 19, 1989; rehearing *en banc* granted, Aug. 9, 1989)

Editor's Note: The American Medical Association, with other medical societies, submitted a brief *amicus curiae*, in support of Massachusetts' position that Title X regulations were unconstitutional. This position is based on the general principles which govern the provision of medical services and the relationship between physician and patient.

First, it is fundamental that "the patient should make his own determination on treatment." *Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association* ("AMA Opinions") ¶8.07 (1986), ¶8.08 (1989). Because the patient has a right to make his or her own decisions about medical treatment, in consultation with a physician, the physician must fully and accurately

(Continued on page 29)

MEDICAL ORGANIZATION

122nd Annual Session Plans Nearing Completion

A number of scientific, business and social events are on the agenda for MSMA's 122nd Annual Session, May 30-June 3 at Jackson's Coliseum Ramada Inn. MSMA members are encouraged to make plans now to attend the five-day meeting.

House of Delegates sessions will be held on Thursday and Sunday mornings, with reference committee meetings set for Thursday and Friday afternoons. Also on Thursday will be a joint meeting of the Young Physicians Section and the Hospital Medical Staff Section, followed by the annual President's Reception.

Scientific programs are set for Friday (Medicine Plenary Session) and Saturday (Surgery Plenary Session). Specialty societies, medical alumni organizations and the MSMA Auxiliary all will meet during the week. Watch for more information in subsequent issues of the *Journal* and the *MSMA Report*.

Mississippi Thoracic Society Elects Officers for 1990



New officers for the Mississippi Thoracic Society include, left to right, Dr. Hugh Gamble, Greenville, president; Dr. William Kellum, Tupelo, outgoing president; and Dr. Keith Mansel, Jackson, vice president. Not pictured is Dr. John Studdard, Jackson, secretary-treasurer. These officers were elected at the recent Annual Meeting/Scientific Session of the Mississippi Thoracic Society held in Jackson.

UMC Announces Faculty Appointments

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointment of three faculty members following approval by the Board of Trustees of State Institutions of Higher Learning.

In the School of Medicine, Dr. Otrie B. Hickerson was named assistant professor of psychiatry and human behavior and Dr. Rebecca R. Waterer, instructor in medicine. Centerwide, Dr. Seyed H. Ghaffari was appointed instructor in microbiology.

Dr. Hickerson earned the M.D. in 1962 at Howard University. She took her internship at Kings County Hospital in Brookland, New York, followed by a residency in psychiatry at the Mental Health Institute at Independence, Iowa. She worked as a staff psychiatrist at the Minninger Foundation in Topeka, Kansas, until 1967, when she joined the staff at the Department of Public Health's Community Health Center in Washington, D.C. She has held positions as psychiatrist for the Jackson Veterans Administration Medical Center; at Tougaloo College, where she was instructor in psychology, and at the University of Mississippi Medical Center, where she was clinical instructor in psychiatry from 1969 until her promotion to clinical assistant professor in 1977. She was named assistant professor of psychiatry and human behavior in 1985. She also was director of mental health for the Jackson-Hinds Comprehensive Health Center from 1970 until 1977, and has worked in private practice. She was a consultant for Special Education Services for the Jackson Public Schools before her Medical Center appointment.

Dr. Waterer earned the B.S., magna cum laude in 1981 at Mississippi State University and the M.D. in 1985 at the University of Mississippi Medical Center, where she took her internship and residency in internal medicine. She had been on the medical staff at Mississippi State Hospital at Whitfield since 1988.

Dr. Ghaffari earned the B.S. in 1974 at Azarabadegan University in Tabriz, Iran, the M.S. in 1980 at the University of Southwestern Louisiana and the Ph.D. in 1983 at the University of Southern Mississippi. He was a medical technologist from 1974-1976 with the Public Health Center in Lahijan, Iran, and worked as a teaching assistant at the University of Southwestern Louisiana and a research assistant at USM. In 1983, he came to the Medical Center as a senior research associate in biochemistry, and had been a senior research associate in microbiology since 1986.

MSMA Delegation Attends Political Education Conference in Washington



A large delegation from MSMA attended the AMA National Political Education Conference in Washington, DC in October. Pictured at the Congressional Reception on Capitol Hill are: front row, left to right, Dr. Ed Hill, Dr. L. H. Brandon, Dr. Jack Hoover, Sara Ann (David) Owen; Mary Rose (Michael) Carter, and Melissa Russell, daughter of Dr. Richard Russell; second row, left to right, Dr. Michael Carter, Jr., Jean (Ed) Hill, Dottie (John) Estess, Rachael (L. H.) Brandon, Nancy (Eric) Lindstrom, Dr. David Owen, Jackie (Richard) Russell, and Clare Elliott; third row, left to right, Dr. John Braun, Dr. George McGehee, Bucky Murphy, Dr. Richard Russell, Patty (L. C.) Henson, and Dr. L. C. Henson.

122nd Annual Session

May 30-June 3, 1990

Jackson, Mississippi

Mark Your Calendar Now!

NEW MEMBERS

CHANEY, JAMES P., Amory. Born Tylertown, MS, Nov. 24, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned one year, University of Tennessee, Knoxville, and obgyn residency, Vanderbilt University Medical Center, Nashville, 1986-89; elected by North Mississippi Medical Society.

CRASTO, DAVID W., Jackson. Born Brookhaven, MS, Aug. 23, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and anesthesiology residency, University Medical Center, Jackson, 1985-89; elected by Central Medical Society.

CURRY, ROBERT LEE, IV, Greenville. Born Washington, DC, Nov. 19, 1957; M.D., Louisiana State University School of Medicine, New Orleans, 1954; interned one year, general surgery residency (1985-86) and urology residency, 1986-89, University Medical Center, Jackson, MS; elected by Delta Medical Society.

FLOWERS, RICHARD H., III, Jackson. Born New Orleans, LA, March 19, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1984; one year internship, same; internal medicine residency, University of Virginia Medical Center, Charlottesville, 1985-87; fellowship in epidemiology, same, 1987-88; fellowship in infectious disease, Vanderbilt Medical Center, Nashville, TN, 1988-89; elected by Central Medical Society.

GATEWOOD, RONALD W., Laurel. Born Forest, MS, April 10, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and radiology residency, University Medical Center, Jackson, 1985-89; elected by South Mississippi Medical Society.

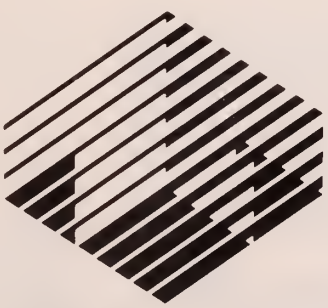
GEER, DAVID ALLYN, Meridian. Born Bridgeport, CT, Jan. 21, 1943; M.D., Yale University School of Medicine, New Haven, CT, 1969; interned one year, surgery residency (1970-74) and cardiovascular surgery residency; 1974-76, Stanford University Medical Center, Stanford, CA; elected by East Mississippi Medical Society.

HAYTER, RONALD G., Pascagoula. Born Houston, TX, June 23, 1954; M.D., University of Texas School of Medicine, Houston, 1979; interned, Medical College of Georgia Hospitals, Augusta; orthopedic surgery residency, Ohio State University Medical Center, Columbus, Jan. 1985-June 1985, and Medical College of Georgia, New Augusta, 1984-89; elected by Singing River Medical Society.

HENRY, WILLIAM O., Biloxi. Born Hattiesburg, MS, July 16, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned and diagnostic radiology residency, University of Texas Health Center, Parkland Memorial Hospital, Dallas, TX, 1979-83; elected by Coast Counties Medical Society.

KOURY, ALBERT MICHAEL, Jackson. Born Greenville, MS, July 9, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned, surgery residency and cardiothoracic surgery, University Medical Center, Jackson, MS, 1982-89; elected by Central Medical Society.

LONGEST, TOM BRUCE, JR., Bruce. Born Bruce, MS, Feb. 18, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family medicine residency, University of Alabama Medical Center, Tuscaloosa, 1986-89; elected by Northeast Mississippi Medical Society.



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NEW MEMBERS/Continued

LUCAS, MARSHA G., Greenwood. Born Tulsa, OK, April 25, 1956; M.D., Duke University School of Medicine, Durham, NC, 1984; pathology residency, same, 1984-87; fellowship, blood banking, North Carolina Memorial Hospital, Durham, 1988-89; elected by Delta Medical Society.

MORGAN, JAN S., Jackson. Born Jackson, MS, Sept. 11, 1953; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and anesthesiology residency, University Medical Center, Jackson, 1985-89; elected by Central Medical Society.

MUAKKASSA, FARID, F., Jackson. Born Beirut, Lebanon, April 4, 1956; M.D., American University of Beirut Medical School, Lebanon, 1983; interned, one year, St. Francis Medical Center, Trenton, NJ; general surgery and critical care/trauma fellowship, same, 1984-89; elected by Central Medical Society.

PANG, VICTOR G., Clarksdale. Born Memphis, Sept. 15, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned, one year, Baptist Memorial Hospital, Memphis, TN; ophthalmology residency, University of Missouri Medical Center, Kansas City, 1985-88; elected by Clarksdale & Six Counties Medical Society.

POOLE, GALEN V., JR., Jackson. Born Kentucky, April 13, 1951; M.D., University of Kentucky College of Medicine, Lexington, 1978; interned and surgery residency, North Carolina Baptist Hospital, Winston-Salem, 1978-85; elected by Central Medical Society.

RUSHING, WILLIAM RICHARD, Tupelo. Born Forest, MS, July 27, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and ob-gyn residency, University Medical Center, Jackson, 1985-89; elected by Northeast Mississippi Medical Society.

SCHLESSINGER, SHIRLEY D., Jackson. Born Dreux, France, March 28, 1959; M.D., Louisiana State University School of Medicine, New Orleans, 1985; interned and medicine residency, University Medical Center, Jackson, 1985-89; elected by Central Medical Society.

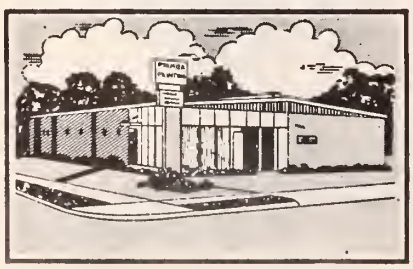
SHUMAKER, TIMOTHY D., Whifield. Born Louisville, MS, July 16, 1960; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family medicine residency, University Medical Center, Jackson, 1986-89; elected by Central Medical Society.

TENNYSON, WENDY RENEE, Pearl. Born Munich, Germany, Nov. 25, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family medicine residency, University of South Alabama Medical Center, Mobile, 1986-89; elected by Central Medical Society.

WRIGHT, TIMOTHY M., Jackson. Born Louisville, MS, April 25, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1980; interned and medicine residency, University Medical Center, Jackson, 1980-83; elected by Central Medical Society.

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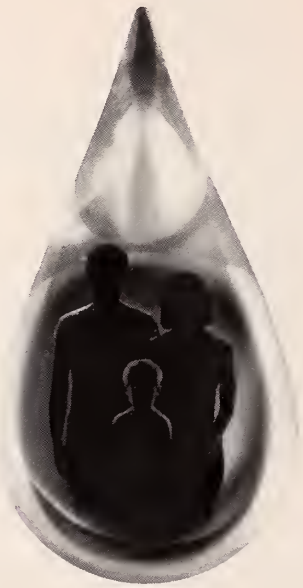
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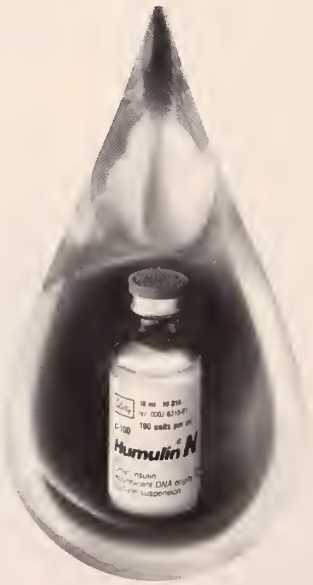
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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society. 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society., 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Street
Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Seargeant Prentiss Dr.
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
I-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave.
Pascagoula, MS 39567

Greenwood Leflore Hospital
1401 River Rd.
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Oxford-Lafayette County Hospital
Highway 7, South
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr.
Jackson, MS 39216

Delta Medical Center
1400 E. Union
Greenville, MS 39704

Methodist Hospital
5001 W. Hardy St.
Hattiesburg, MS 39401

PERSONALS

Ossama Al-Mefty of UMC lectured at the International Workshop on Microsurgery at the Cranial Base in St. Louis, Missouri, and also was surgical course instructor at the meeting of the American Academy of Otolaryngology in New Orleans.

Joseph S. Boggess and Walter N. Cosby announce the opening of their combined practice at Otolaryngology Associates, Ltd., 515 Willowbrook Road in Columbus.

Bryan Cowan of UMC lectured at the Armed Forces District annual meeting in Washington, DC.

Carl Evers of UMC attended the Interim Meeting, Executive Committee and Protocol Meeting of the Gynecologic Oncology Group in Buffalo, New York.

Weston E. Folse of Collins has associated his practice of family medicine with the Hattiesburg Clinic.

James L. Griffith of UMC presented a workshop at the Mississippi Psychological Association meeting in Biloxi.

C. Nolen Hudson of Vicksburg has been elected president of the medical staff at Mercy Regional Medical Center. Other officers are Debbie Smith, president-elect; Barry Holcomb, chief of medicine; Calvin Poole, chief of surgery, and Briggs Hopson, chief of staff.

James Hughes of UMC spoke at the U.S. Navy Orthopedic Update in Berchtesgaden, West Germany.

John F. Jackson of UMC chaired the Cytogenetics Committee session at the Pediatric Oncology Group Fall meeting in St. Louis.

Joseph E. Johnston of Mt. Olive has been recertified as a diplomate of the American Board of Family Practice.

Robert Jorden of UMC spoke at Jacksonville (Florida) University Hospital.

Kent Kebert of McComb has been certified as a diplomate of the American Board of Ophthalmology.

Herbert Langford of UMC made a presentation at the 102nd meeting of the American Clinical and Climatological Association in Southhampton, Bermuda and also presented a blood pressure workshop in Bethesda, Maryland.

James N. Martin of UMC made a presentation at meetings of the American College of Obstetrics and Gynecology in Roanoke, Virginia and St. Louis, Missouri.

Joe Norman of UMC presented a paper at the American College of Chest Physicians meeting in Boston, Massachusetts.

Charles Pruitt, III of Magee has been recertified as a diplomate of the American Board of Family Practice.

Seshadri Raju of UMC was a faculty member at the annual Montefiore-Einstein Symposium on Current Critical Problems and New Horizons in Vascular Surgery in New York.

Robert Rhodes of UMC was visiting professor at the University of Pittsburgh, Pennsylvania.

F. H. Savoie of UMC spoke at the Challenge of Shoulder Rehabilitation meeting in San Francisco.

Carol Scott-Conner of UMC presented a paper at the Southern Medical Association meeting in Washington, DC.

Cliff Seyler of Pascagoula spoke to Gautier Elementary School PTA members about the State Health Curriculum.

Robert Smith of UMC made a presentation at the Congress of Neurological Surgeons in Atlanta.

William M. Temple has associated with Bryan F. McCraw for the practice of internal medicine at 914 Sumrall Road in Columbia.

H. Wade Westbrook announces the opening of his office for the practice of obstetrics and gynecology at Physicians Office Building, 7603 Southcrest Parkway in Southaven.

Louis Wise of Jackson spoke on hazards of overexposure to the sun on the "Farmweek" program on the Mississippi ETV Network.

DEATHS

GILLESPIE, GEORGE E., Jackson. Born Lexington, MS, July 29, 1920; M.D., Vanderbilt School of Medicine, Nashville, TN, 1944; interned one year and one-year surgery residency, Barnes Hospital, St. Louis, MO; surgery residency, Oschner Foundation Hospital, New Orleans, 1948-51; died Nov. 11, 1989, age 69.

NEWTON, C. DAVE, Brandon. Born Brookhaven, MS, July 24, 1949; M.D., University of Mississippi School of Medicine, Jackson, 1974; interned U.S. Public Health Services Hospital, New Orleans; radiology residency, U.S. Naval Regional Medical Center, Oakland, CA, 1979-81; died Nov. 11, 1989, age 40.

WADLINGTON, JAMES E., Jackson. Born Oct. 1, 1907; M.D., University of Tennessee College of Medicine, Memphis, 1931; interned, one year, Mississippi State Hospital; residency in surgery, USAF, 1942-46; died Nov. 24, 1989, age 82.

MEDICO-LEGAL BRIEF

Continued from page 22

disclose information necessary to permit the patient to make an informed choice. AMA Opinions ¶8.07 (1986), ¶8.08 (1989).

In order to discharge this obligation to help the patient make an informed choice, a physician must be free to disclose all relevant facts within the physician's knowledge or expertise that may bear on the patient's decision. Appropriate disclosure may include apprising the patient of his or her current medical condition and its potential implications for future health, explaining the need for further testing or treatment, counseling with respect to the full spectrum of available medical options, and referral, if necessary, to an appropriate specialist or other provider.

Second, it is universally accepted that once a physician undertakes to provide medical services to a patient the physician owes the patient a responsibility to perform those services competently and in accordance with accepted medical standards. Moreover, if in the course of performing even limited services, a physician becomes aware of additional medical facts or conditions which should be discussed with the patient, the physician has a responsibility to do so even if the physician chooses not to perform additional treatment personally. Thus, "although a physician may choose to limit his practice to certain diagnostic services, he may not neglect a patient under his care." AMA Opinions ¶3.05.

Third, the professional duty that a physician owes to a patient also encompasses advising the patient with respect to referrals. AMA Opinions ¶3.04.

Principles of medical and standards of professional ethics demands that a physician must be free to disclose to a patient all the relevant facts within the physician's knowledge that will permit the patient to make an informed decision with regard to his or her medical treatment. This is true even if the potential course of treatment ultimately will be undertaken at some future time by another physician.

Legal commentators speculate that the full appellate court decided to rehear the arguments in this case in light of the U.S. Supreme Court's opinion in *Reproductive Health Services v. Webster*, 109 S.Ct. 3040 (1989).

Terrie A. Rymer, J.D.
Staff Attorney
Health Law Division, AMA

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. $12.95. 1989.

Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions. (Report of the U.S. Preventive Services Task Force). Michael Fisher, Editor. Williams & Wilkins, Baltimore. 1989.

THE PRESIDENT SPEAKING

(Continued from page 20)

we in the U.S. had the best health care system in the world, and that no other country's health care system could be implemented in the United States satisfactorily or realistically.

The only disruptive part of the interim meeting was a financial and administrative matter related to the inappropriate transfer of AMA funds to a top executive's retirement fund. Even though this was felt by the majority to be a relatively minor internal administrative problem that corrective action taken at this House of Delegates would prevent in the future, there were those who attacked the administrative leadership of the AMA vehemently; this despite the fact that the attack might result in loss of credibility of the American Medical Association and thus a generic loss in credibility for American physicians.

However, the general tenor of the entire meeting was one that was very positive and very upbeat for organized medicine.

I left the interim meeting of the AMA with a feeling of optimism. I am optimistic about the fact that we defeated mandatory assignments several times in the last two or three congressional sessions, that we continue to be the largest publisher of scientific information in the world, and that we continue to be the leaders in almost every aspect of health care ranging from lobbying in congress (where we are considered one of the top five most powerful lobbying organizations in Washington) to being the authority on many other health care issues. The AMA is addressing the social issues of adolescent health, family violence, and multiple other concerns with maturity and with activism.

I left with optimism concerning significant problems like the expansion of health insurance to all employed Americans, the creation of a Medicare Commission to develop reforms that would insure continued financial access for our older citizens, for legislation to address the financial inadequacies of the Medicare program, and with the development of a long-term care financing system that the public can afford and would be workable.

So, when you throw up your hands in frustration concerning problems of health care, remember that things are, in my opinion, improving significantly. I hope we will all continue to work and support the endeavors of organized medicine.

Let your representatives to the American Medical Association hear from you about those frustrations.



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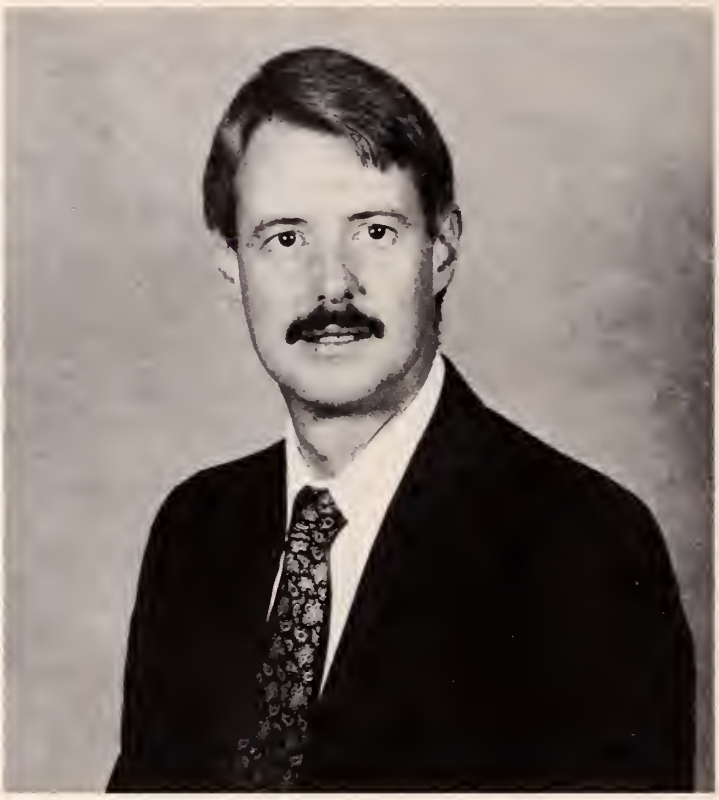
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James F. Beattie, M.D.
Pathology
Chattanooga, TN

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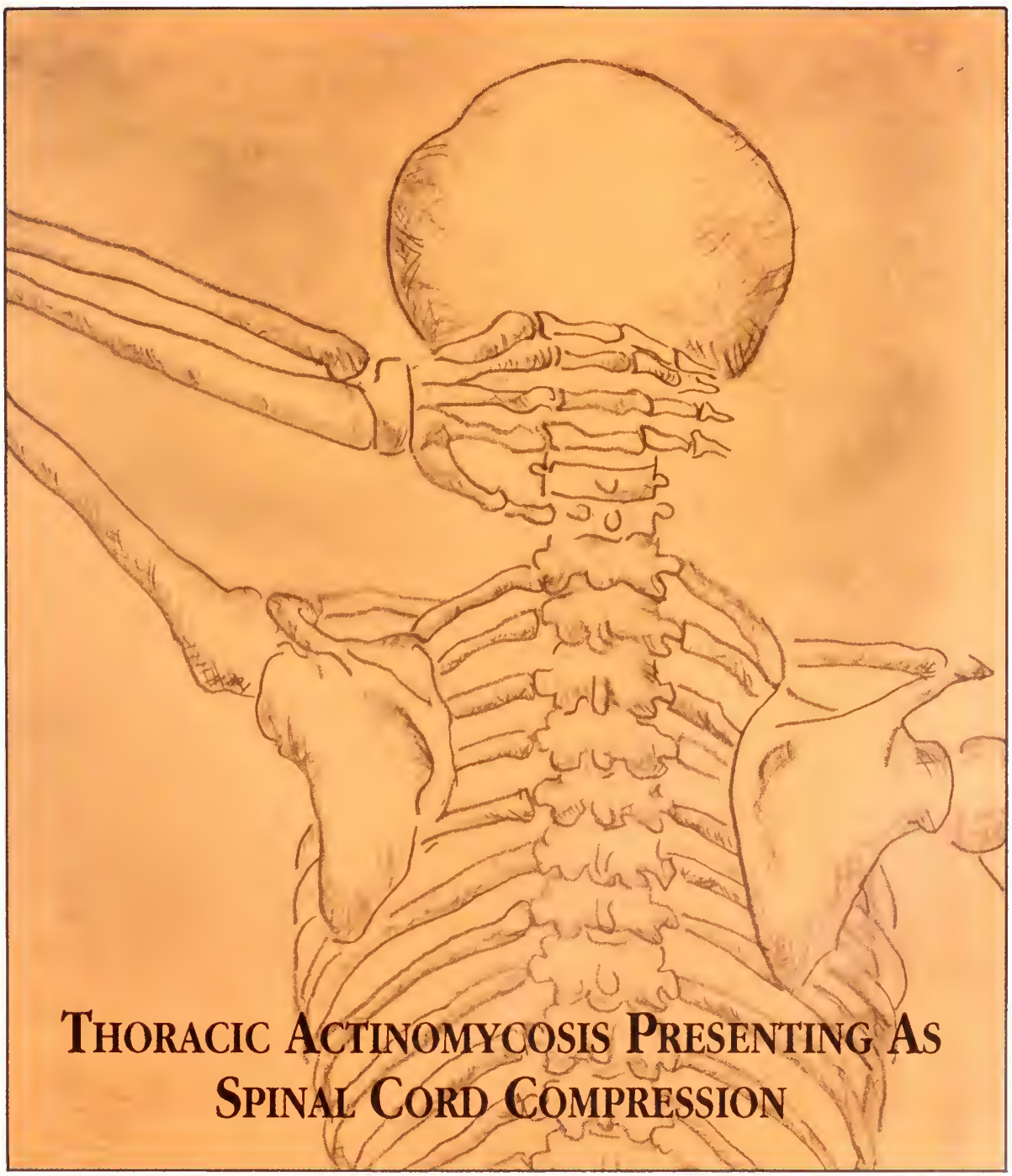
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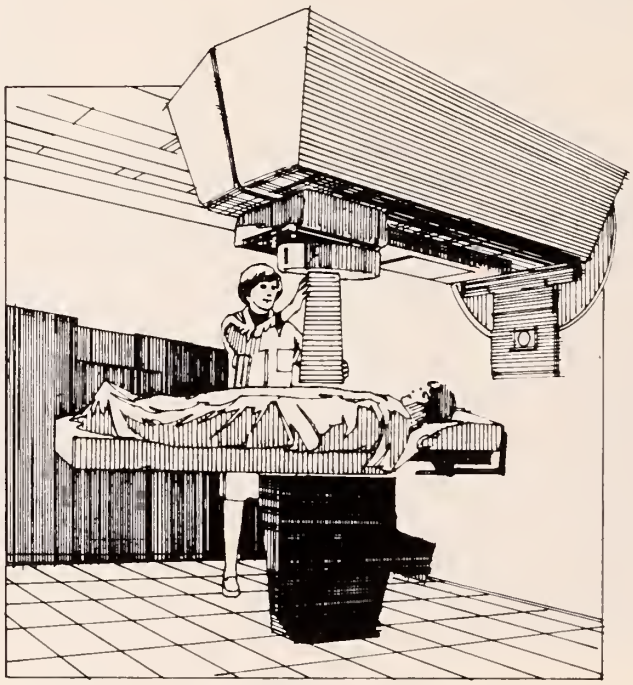
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NEWSLETTER

February 1990

Dear Doctor:

"Healthier Youth by the Year 2000: Countering the Exploitation of Youth" is the theme of the 1990 National Congress on Adolescent Health, May 10-12 in Washington, DC. The opening session will focus on a report to be released May 10 by the AMA and the National Association of State Boards of Education, "The Role of School and Community in Improving Adolescent Health."

> The conference will include presentations on children, youth and tobacco; mobilizing communities to work with youth; workshops on marketing health care for adolescents and integrating community services; and a teenage panel on health concerns of youth.

Contrary to earlier predictions, a new analysis concludes there should not be a surplus of U.S. physicians in the foreseeable future. The report in the January 26 JAMA says demand for physicians' services rose at least as quickly as the supply of doctors. An editorial in the same issue criticizes the finding, declaring that the authors incorrectly applied standard economic theory to the question of physician surplus. The editorial notes, "Increasing hours worked, increasing numbers of patients seen, and increasing income per physician can be viewed as indicators of increasing use rather than an authentic rise in demand."

The American health care system and many of its components are out of control and immediate steps are needed to arrest their demise, say authors writing in the January 5 JAMA. Greed and technology are two of the main culprits in today's spiraling medical costs, according to several related articles. George Lundberg, editor of JAMA, agrees, noting that the start of a new decade affords opportunities to regain balance. Two authors call for a presidential blue-ribbon commission to study today's health care dilemma and recommend changes.

REMINDER: Plan now to attend MSMA's 122nd Annual Session, May 30-June 3 in Jackson.

Sincerely,

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Frank Cochran

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DATELINE

White House Adviser To Head CDC

Washington, DC - William Roper, MD, MPH, is expected to move to Atlanta in March to head up the Centers for Disease Control. Since last year Roper has been the President's top health adviser. He formerly was head of the Health Care Financing Administration (HCFA). HHS Secretary Louis Sullivan, MD, still is seeking a replacement for James Wyngaarden, MD, head of National Institutes of Health, who stepped down last year.

Last Call For Scientific Exhibits

Jackson, MS - Physicians who wish to participate in the scientific exhibit for MSMA's 122nd Annual Session should apply at once for space. To request scientific exhibit space, write to MSMA headquarters, giving title of the exhibit, names of exhibitors, and estimated number of linear feet required. Exhibitors are eligible for the Aesculapius Award for excellence of presentation and content.

Medical Portion of CPI Continues to Increase

Washington, DC - Medical care costs continue to climb, registering a 0.8% increase in November, according to the U. S. Labor Department's Consumer Price Index. The November increase included a 1.1% increase in prescription drug costs, a 1% increase in hospital room costs and a 0.5% increase in physician services. In 1988-1989 there was an 8.6% increase in medical costs, compared with a 4.7% increase in the overall CPI.

Professional Liability Data Released by AMA

Chicago, IL - Obstetrics/gynecology had an 88.8% increase in medical malpractice claims frequency in 1988, but other specialties experienced a continuing decline. Ob-gyns paid the highest average liability insurance premiums - $35,300 per year. Psychiatrists had the lowest - $4,400. Overall, premium increases slowed slightly between 1987-1988, says Socioeconomic Characteristics, 1989 from the AMA.

Loan Program Increases Use of Infant Car Seats

Chicago, IL - Use of child-restraint seats in infants younger than six months old dramatically increased when a loan program provided them for low-income families, says a study in the January issue of American Journal of Diseases of Children. Community-based loan programs for the seats were more effective than other types, since such programs are based on language and values of the community residents.



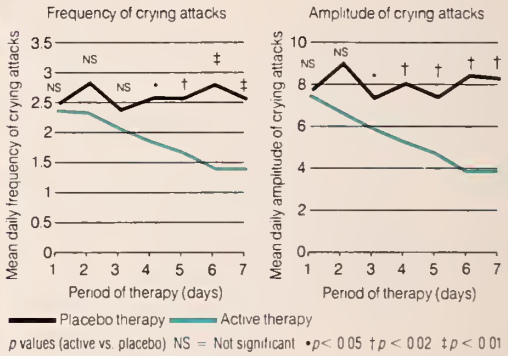
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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner* 1988;232:508

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
February 1990, Volume XXXI, Number 2

ORIGINAL PAPERS

Protocol For Replantation and Revascularization of Digits and Limbs

SHELBY K. BRANTLEY, M.D.
STEPHEN F. DAVIDSON, M.D.
PAUL J. TALBOT, M.S.
SUMAN K. DAS, M.D.
Jackson, Mississippi

OVER THE PAST 25 years, significant advances have been made in the field of microvascular surgery, especially in the area of replantation and revascularization. It is now technically feasible to replant or revascularize most amputated digits or extremities with expectation of an 80-90 percent survival rate, as compared to the 25-39 percent predictable in the 1960s.[1] This significantly improved survival rate has given rise to a dilemma with regard to selection of candidates for replantation when one must consider factors such as functional use, cost, cosmesis and loss of wages. Most patients, if given the opportunity, would almost assuredly select an attempt at limb salvage over loss of the extremity or digit, yet only one-fifth of these patients are seen by a replant surgeon in time for attempted salvage.[2]

Surgeons are faced with making a logical, unbiased decision in selecting candidates for replantation. A technically successful replantation resulting in a nonfunctional, deformed limb with attendant tremendous financial cost and temporal losses for hospitalization and multiple follow-up clinic visits would be a travesty. The average duration of time lost from work ranges from 60 to 120 days in a replant patient, but patients with amputations can require longer follow-up with more complications and additional surgical procedures. Therefore, such a decision must be made soberly and realistically.

The upper extremity is involved in 31 percent of disabling work injuries, thus it is important that primary care physicians be educated as to proper treatment and triage.[2] The purpose of this report is to establish guidelines regarding selection of candidates for revascularization or replantation and to provide a protocol for the primary care physicians who initially see and screen these injuries.

History

The first replantation procedure was performed in 1903 by Hoepfner, who amputated and immediately reattached the hind limb on dogs. In 1906, Carrel advocated the concept of triangularization for repair of vessels. Another significant contribution was that of Nylen and Holingren in 1926 with the development of the operative microscope. After a 30-year hiatus, Douglas in 1959 replanted distal fingertips in monkeys without a microvascular anas-

From the Department of Surgery, University of Mississippi Medical Center, Jackson, MS.

tomosis. In 1962, clinical replantation was first attempted by Malt of Boston, who performed the first successful replantation of an arm with a functional hand. The Chinese physician Chen replanted a forearm level amputation one year later. Also in 1963, Kleinert and Kasdin revascularized a thumb and Komatsu and Tamai replanted an amputated thumb. In 1967, Chen followed up his earlier work with a successful finger replantation. From these pioneer efforts microsurgery has advanced into an exciting and expanding new area. Lu et al, for example, have documented their successful replantation of all ten fingers.[3]

Criteria for Replantation

The decision as to which patient should have replantation is especially difficult to make. Each case has its individual presentation and potential contraindications to replantation. General guidelines, however, can be provided to help the primary physician make an educated decision on referral for possible surgery or to render the definitive treatment himself.

Amputations that should almost always be replanted include any finger on a child; the thumb, since it contributes 40 percent of the hand's function; and two or more proximally amputated digits. A single digit in a young female may be replanted, particularly if it is the ring finger. Any forearm or arm amputation should be referred for evaluation.

Injuries that fall into the gray zone include multilevel amputations, a single digit except for the thumb, and a grossly avulsed or contaminated amputation. Also debatable are those patients who are over 60 years old, or who have pre-existing joint disease, or will be unable to participate in the postoperative rehabilitation. Patients with foot or leg amputations are also questionable candidates for replantation because of poor recovery of motor and sensory function in these extremities, and also because good lower extremity prostheses have been developed. There is also an increased risk of postreplant toxemia from the muscle mass of the lower extremity inasmuch as that muscle dies rather quickly in an ischemic environment. There are exceptions, however, such as that reported by Fukui, et al.[2] General criteria for replantation of lower extremities include minimal bone loss, young age, and a reasonable expectation for neurological recovery.

Contradictions include amputation distal to the



Figure 1: Thumb shown preoperatively.

DIP joint, advanced arteriosclerosis, warm ischemia time > 10 hours, medical problems precluding prolonged anesthesia, or apparent other associated life-threatening injuries.[1] A warm ischemia time exceeding 10 hours is not an absolute contraindication, as demonstrated by Inoue, et al.[4] Three of four patients in their series were successfully replanted with a mean warm ischemic time of 24 hours. Common sense should always be used when a grossly mutilated digit or an obviously unsalvageable limb presents. It is important to reiterate that these are not ironclad rules but general guidelines; each case should be evaluted individually.

Treatment Protocol

The physician who initially evaluates the patient should adhere to these basic guidelines:

(1) First treat the whole patient, always remembering that preservation of life is the foremost responsibility.
(2) The possibility of replant should be considered, asking whether or not potential gain in function will outweigh the potential influence on function from a useless finger.
(3) The avulsed part should be thoroughly rinsed with sterile saline, then wrapped in most gauze or placed in a clear plastic bag (Ziploc). The bag should be placed in an ice bath, never directly on ice, and never on dry ice.



Figure 2: Postoperative view depicting good function and cosmetic result.



Figure 3: Preoperative view showing avulsed digits.

(4) The stump should be irrigated and a sterile dressing placed over it. Clamps, ligatures and tourniquets should be avoided if possible
(5) Antibiotic therapy and tetanus prophylaxis should be instituted and the patient transferred expeditiously to the replant center.

A step-by-step algorithm for managing the patient who presents with an amputation would include initial evaluation and treatment of any life-threatening injury, followed by identification of patients who are potential candidates for replantation. The treatment protocol outlined above should be initiated. The replant surgeon should then be notified, apprised of pertinent history, and consulted for further management recommendations. The patient should be transferred expeditiously by helicopter or ground ambulance (whichever is quicker).

Case Reports

Case #1: A 25-year-old white male dropped an ax on his nondominant left thumb while cutting firewood. The thumb was amputated obliquely proximal to the interphalangeal joint (see Figure 1). The patient was evaluated at an outlying hospital and referred to the University of Mississippi Medical Center. Total ischemia time was four hours. Reattachment was performed in the standard replant fashion consisting of initial bony fixation followed by extensor tendon repair, anastomosis of dorsal veins and then digital arteries. The flexor tendons and finally the digital nerves were then repaired (see Figure 2).



Figure 4: Postoperative view showing regain of function.

Case #2: A 26-year-old white female had been loading horses onto a trailer when a mule she was leading jerked away and avulsed her left thumb and index finger. There was extensive soft tissue injury to the thumb but not to the index finger (see Figure 3). The operative plan included pollicization of the index finger, which was undertaken using K-wire bony fixation followed by microvascular repair (see Figure 4).

Summary

This report was designed to aid the primary care physician who is confronted with traumatic amputations, and to suggest treatment and triage guidelines. Giant strides have been made in the past 25 years in the area of microsurgery. It is now possible to salvage a digit or limb that in earlier times would have been lost. The most important steps begin at out lying hospitals at which the patient is first evaluated. This exciting new area of surgery requires education and standardization of treatment to afford the patient the best care possible. ★★★

2500 North State Street (39216)

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Phencyclidine Intoxication: A Case Report

H. THOMAS MILHORN, JR., M.D., Ph.D.
Jackson, Mississippi

ALTHOUGH LESS COMMON in Mississippi, Phencyclidine (PCP) is a common drug of abuse in many areas of the United States. It was originally developed as a dissociative anesthetic by Parke-Davis Laboratories in 1957. Because a significant number of patients exhibited bizarre post-operative behavior, it was taken off the market in 1965.[1-3] Ketamine, a shorter acting homolog with fewer side effects, replaced PCP as an anesthetic for humans and is still in use today.[4] PCP continued to be used as a veterinary anesthetic from 1965 to 1978. All legal manufacture of PCP ceased in 1979, and it was placed in Class II by the DEA in 1970.[2, 5, 6]

PCP is produced inexpensively in clandestine laboratories set up in kitchens, garages and basements. In addition to being used for its own properties, it is frequently misrepresented by dealers as some other drug, most often as LSD, psilocybin, mescaline, synthetic cocaine or THC.[3-6] Because of its low cost and ease of manufacture, it is also used to adulterate other drugs.[4]

PCP is most commonly mixed with dried leaf materials, such as marijuana, tobacco, oregano or parsley, and smoked. It can also be snorted through the nose. Oral administration as a liquid or pill sometimes occurs. Less often, it is injected intravenously.[1, 3]

Case Report

R. R. is a 32-year-old black male, visiting from California, who was brought to the emergency room of a local hospital by ambulance. He had been found in a motel room unresponsive, reportedly having overdosed on an unknown substance. He was responsive to deep pain, did not have a gag reflex and his pupils were midpoint and slow to react. His eyes were open and seemed to be fixed in a stare. His skin was warm and dry and his breath sounds were clear and bilaterally equal. His blood pressure was 130/60, pulse rate 87 and temperature 102°. He had marked muscle rigidity with fasciculations. He repeatedly rose from the stretcher and moved his head from right to left with no purposeful movement. His wife stated she had no knowledge of the patient having ever used drugs.

A nasotracheal tube was placed followed by a nasogastric tube. Activated charcoal was then instilled into the stomach. He was given 0.8 mg of Narcan intravenously along with 50 ml of 50 percent dextrose in water (D50W) without effect. A Foley catheter was inserted and yielded a yellowish, thin urine with brownish colored material thought to be myoglobin. He became extremely restless and, over a course of thirty minutes, was given 40 mg of diazepam (Valium®) intravenously which decreased his erratic behavior and slowed his fasciculations but did not affect his muscle rigidity.

A drug screen was positive for PCP and ethanol. Blood gases on 40 percent oxygen by face mask were pH 7.26, Pco_2 38 torr and Po_2 69 torr. A white blood cell count was 18,700 per cu mm, hemoglobin was 14 gm/100ml, hematocrit 44, sodium 137 mEq/L, poassium 5.0 mEq/L and CO_2 16.5 mEq/L. A urine analysis showed a pH of 6.0 and was positive for myoglobin. A CPK was 124,500 mu/ml, SGOT greater than 2000 u/ml, LDH greater than 3000 u/ml, BUN 63 mg/100ml and creatinine 5.5 mg/100 ml.

A triple lumen catheter was placed in the right internal jugular vein and the patient was given 2000 cc of fluid along with 100 cc mannitol to maintain adequate urine flow.

He was then transported to the intensive care unit where he was placed on a ventilator and given 5 mg pancuronium (Pavulon®) to paralyze him to prevent further muscle damage. Pulmonary medicine and nephrology consultants were then obtained to assist with the patient's management. Forced di-

From the Department of Family Medicine, University Medical Center, Jackson, MS.

uresis was continued with furosemide (Lasix®) and saline. His blood pressure continued to rise. It was adequately treated with antihypertensive medications. Fever was treated with aspirin suppositories. Frequent suctioning to remove secretions was required.

A computed tomography (CT) scan and EEG were obtained. The CT scan was normal. The EEG showed only a slowed baseline rate thought to be due to metabolic or anoxic encephalopathy.

His hospital course was long and complicated. As a result of the myoglobinuria, his BUN and creatinine continued to rise and reached peaks of 139 mg/100ml and 12.3 mg/100ml, respectively. He required hemodialysis for several days. His renal function gradually improved, allowing discontinuation of the hemodialysis.

Following discontinuation of the dialysis his serum calcium rose to a maximum of 20 mg/100ml. This was felt to be secondary to the diuretic phase of acute renal failure. He was treated with high volume intravenous fluids and high doses of diuretics. His calcium level responded promptly and returned to normal within a few days.

Because he was maintained on mechanical ventilation for an extended period of time, hyperalimentation was required. This resulted in high blood sugars which required the use of insulin. He developed abnormal liver enzymes. A workup was negative and it was concluded that the etiology was related to the hyperalimentation. Several days into his hospitalization he developed massive, spontaneous, bright red hemoptysis secondary to a coagulopathy. A chest x-ray revealed complete opacification of the left lung. The bleeding stopped spontaneously following treatment of the coagulopathy with fresh frozen plasma. He required bronchoscopy for removal of clots.

The patient was discharged 31 days after his hospitalization. At that time he was tolerating a regular diet and ambulating without difficulty. His mental status, renal function and liver enzymes were normal. He refused treatment in Jackson for chemical dependency and returned to California with his wife.

Signs and Symptoms

The signs and symptoms of PCP intoxication are related to the drug dose, the route of administration and the individual's response to the drug. Because the signs and symptoms of PCP intoxication vary greatly, classification according to dosage is confusing and difficult to use.[5, 7] For this reason, it is more helpful to divide PCP intoxication into stages based on presenting signs and symptoms. If the patient is conscious, the level of intoxication is said to be Stage I. If the patient is stuporous or mildly comatose, with intact response to deep pain, the level of intoxication is Stage II. The comatose patient with absent response to deep pain is classified as Stage III.[8]

Stage I intoxication generally corresponds to about 2 to 5 mg of ingested or smoked PCP and corresponds to a serum concentration of 25 to 90 ngm/m. It almost always results from smoking PCP. The major manifestations of Stage I intoxication are behavioral. The patient's behavior may be unpredictable. They may appear drunken and euphoric. They may be disoriented, with alternating periods of lethargy and fearful agitation. They may display disorganization of thought, negativism and hostility. They are frequently combative and violent and may display sudden rage. They misperceive distance and time and may feel dissociated from parts of their body. They may demonstrate catatonic posturing and/or stereotyped behavior (sucking, picking, repetitive motor movements). They may stare blankly at their surroundings, appear to be unable to speak, or talk to themselves, and may demonstrate echolalia (involuntary repetition of a word or sentence just spoken by another person) or hyperacusis (increased sense of hearing). They are usually unconcerned about their grooming. They may be socially disinhibited, obscene and exhibit nudity.[2, 8-10]

Their perception of imminent danger is impaired and they may fail to flee fires or avoid obvious danger. They have decreased pain perception and may do harm to themselves with apparent lack of concern. They may have delusions of invulnerability, may seem to possess inordinate strength and to be without fear. They are capable of violent or self destructive behavior. They have been known to set fire to themselves or stab or assault others. Patients have been described as trying to stop a train by standing in front of it.[8, 9]

Symptomology may be indistinguishable from functional psychosis (paranoid schizophrenia, catatonia, mania). Although visual, auditory and tactile delusions may occur, patients seldom admit to true hallucinations.[2, 8, 11]

Physical signs and symptoms of Stage I PCP intoxication include dysarthria, impaired tandem gait and ataxia. Some degree of generalized muscle rigidity may be present or isolated masseter and neck muscle spasm may occur. Horizontal nystagmus followed later by vertical nystagmus may occur. The lid reflex may be lost and the patient appear to have a blank stare. Temperature may be mildly elevated (98-101°F). Pulse rate, blood pressure and respi-

ration may also be mildly elevated. Laryngeal/pharyngeal reflexes may be hyperactive. Other signs and symptoms include nausea, vomiting, diaphoresis, flushing, lacrimation and hypersalivation.[2, 8, 10, 11]

Stage II intoxication usually results from 5-25 mg of ingested or smoked PCP, resulting in a serum concentration of 90-300 ng/ml. Physical signs and symptoms of Stage II PCP intoxication include tonic-clonic seizures on stimulation, generalized muscle rigidity and twitching, nystagmus in any direction, lost corneal reflex, roving eyes or fixed stare, disconjugate gaze and ptosis. Temperature may be moderately elevated (101-103°F). Pulse rate, blood pressure and respiration may be elevated 25 percent above normal. Deep tendon reflexes may be further increased and crossed limb reflexes may be present. Laryngeal/pharyngeal reflexes are diminished. Other signs and symptoms include protracted vomiting, diaphoresis, flushing, lacrimation and hypersalivation.[2, 8, 10, 11]

Stage III intoxication results from greater than 25 mg ingested or injected PCP, resulting in a serum level of greater than 300 ng/ml. Physical signs and symptoms of Stage III intoxication may include tonic-clonic seizures progressing to status epilepticus, intracranial hemorrhage, generalized myoclonus, opisthotonic or decerebrate posturing and extreme muscle rigidity. Nystagmus in any direction may be present. The eyes may be opened or closed, hippus may be present, pupillary size may be increasing, the corneal reflex may be lost and disconjugate gaze and ptosis may be present. Pulse rate and blood pressure may be 100 percent above normal. Spikes in blood pressure may occur. Periodic breathing, apnea, aspiration pneumonia or pulmonary edema may occur. Deep tendon and laryngeal/pharyngeal reflexes are absent. Other signs and symptoms include diaphoresis, flushing and hypersalivation. Hypertensive crisis, malignant hyperthermia, acute tubular necrosis secondary to rhabdomyolysis, acute hepatic necrosis secondary to hyperpyrexia, high output cardiac failure and death may occur.[2, 8, 10, 11]

Treatment

Treatment of Stage I intoxication consists primarily of managing the behavioral manifestations. External stimuli should be reduced whenever possible. The patient should be placed in a quiet room with minimal visual, auditory and tactile stimuli They may have hyperacusis, so treatment personnel should speak softly. If a talking down strategy does not prove to be effective or if the patient seems to be becoming more agitated, sometimes just leaving them alone may quieten them. If not, diazepam (Valium®) may be helpful. Psychotic reactions are best treated with haloperidol (Haldol®).[12, 13]

Activated charcoal is usually not used in Stage I intoxication. Instrumentation, such as urinary catheter placement, nasogastric tube insertion, and orotracheal intubation, should be avoided. Because attempts to suction the airway may precipitate laryngospasm, they should be avoided. Because PCP intoxicated patients are seizure prone, Ipecac to induce vomiting is contraindicated in all stages. Diphenhydramine (Benadryl®), in Stage I only, can be used to treat localized dystonic reactions.[5, 7, 8, 10]

Treatment of Stage II intoxication includes techniques for reducing fever, such as loosening clothes, sponging with ice water and insertion of aspirin suppositories. Because of the possibility of laryngospasm, deep oropharyngeal suctioning should be avoided when possible. Nasogastric tube insertion and orotracheal intubation should be done only if necessary.[5] Wheezing due to bronchospasm can be treated with aminophylline. Some evidence suggests that restraints may contribute to rhabdomyolysis. Therefore, they should be used only when absolutely necessary.[13, 14] A continuous infusion of D5LR should be started. Blood pressure can be controlled with agents such as propranolol (Inderal®) or hydralazine (Apresoline®).[5, 8, 15]

Since urinary retention may occur, a urinary catheter should be placed. A urine sample should be sent to the laboratory for analysis for myoglobin. Blood for blood gases, electrolytes, CPK, SGOT, SGPT, BUN, creatinine and uric acid should be obtained and sent for analysis.[5, 7, 16]

Although the magnitude of its effectiveness is somewhat controversial, urinary excretion of PCP may be increased by acidification of the urine to a pH of 5.0 to 5.5. This can be done with several agents, including ascorbic acid and ammonium chloride.[5, 17] The use of furosemide (Lasix®) can increase urinary output and hasten PCP excretion. Acidification of the urine is contraindicated in two situations: (1) the presence of myglobinuria and (2) concomitant abuse of large doses of long-acting barbiturates or salicylates for which the treatment is alkalinization of the urine.[5, 8]

Extreme muscle rigidity not responsive to diazepam, especially in the face of rhabdomyolysis, may require neuromuscular blockage and mechanical ventilation.[8]

In Stage III intoxication, intravenous fluids should be administered, a urinary catheter should be placed and urinary output monitored. Vigorous tracheo-

bronchial suctioning is indicated. A large bore gastric tube should be placed and gastric contents suctioned and sent to the laboratory for analysis Activated charcoal should be instilled into the stomach after lavage with normal saline. A nasogastric tube should be placed and connected to continuous suction to remove the PCP that is continually secreted into the stomach from the blood.[5, 7, 8, 10]

In the absence of contraindications, urinary acidification should be instituted and furosemide given. Strict attention should be given to the patient's core temperature, and measures instituted to control it when necessary. Hypertension can be controlled with propranolol, hydralazine or diazoxide (Hyperstat®). Status epilepticus, should it occur, can usually be treated with intravenous diazepam. Neuromuscular blockage and mechanical ventilation may be required for refractory cases.[7, 10, 15] Similarly, extreme muscle rigidity not responsive to diazepam may require neuromuscular blockage and mechanical ventilation. Dialysis has been shown to be ineffective in removing PCP from the body.[8]

Not only may PCP overdose be life threatening but it tends to be the largest lasting of any drug of abuse. The entire picture may take up to six weeks to clear. ★★★

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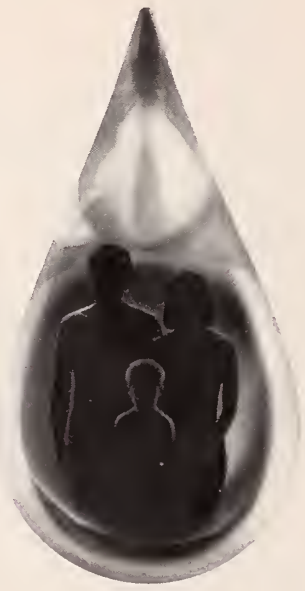
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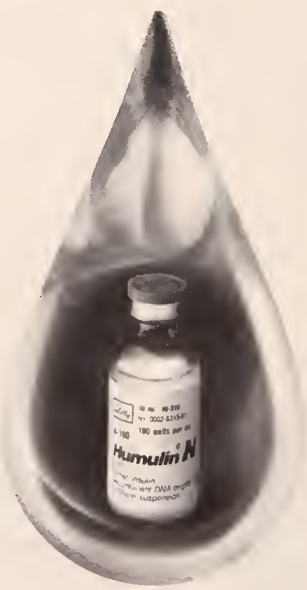
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Thoracic Actinomycosis Presenting as Spinal Cord Compression

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JEFFREY D. ROSS, M.D.
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A single case of thoracic actinomycosis presenting with spinal cord compression is described. The authors review the etiology, pathology, presentation and management of thoracic and vertebral actinomycosis.

Actinomycosis, an uncommon cause of thoracic disease, classically presents with signs and symptoms of pulmonary consolidation with rib erosions on chest radiograph and sinus tracts draining pus and sulphur granules through the chest wall. Spinal cord compression is an exceedingly rare complication of thoracic disease with only six cases reported in the literature. We report here a single case of thoracic actinomycosis that presented with signs and symptoms of spinal cord compression.

Case Presentation

A 46-year-old farm laborer presented to our institution complaining of back pain and leg weakness for one week. Four months prior to admission he noted the appearance of several painless nodules on his anterior chest wall that subsequently enlarged and ruptured, draining pus and blood. These lesions would crust over for a few days only to again open and drain. Over the next three months he also experienced a weight loss of 25 pounds. The week prior to admission he experienced the onset of interscapular back pain associated with progressive lower extremity weakness to the point he could stand for only a few seconds. During this time he also noted the onset of a cough productive of copious amounts of yellow purulent sputum with some blood streaking. He denied fever, chills, seizures, loss of consciousness, recent dental work, or tuberculosis exposure. The patient did have a forty-pack-year history of cigarette smoking and a history of chronic ethanol abuse.

Admission physical examination showed a cachectic, chronically ill appearing, middle-aged black male who was afebrile and normotensive. Mouth examination showed poor oral hygiene with severe dental caries and gingivitis. Examination of the chest revealed eighteen two to three cm crusted nodules over the right anterior hemithorax which were tender to palpation (see Figure 1). A sterile cotton swab could be inserted greater than one centimeter into sinus tracts in multiple lesions. Tubular breath sound and dullness to percussion were noted over the right lung field. The trachea was deviated to the right. Examination of the back showed tenderness to percussion over the mid-thoracic area of the spine but was otherwise unremarkable. Neurological examination revealed weakness of the quadriceps femoris and iliopsoas muscles bilaterally. Deep tendon reflexes were normal bilaterally. Plantar reflexes were bilaterally flexor. He had a sensory level at T10 with return of sensation at L4 with intact perianal sensation.

Admission chest radiograph showed opacification and blunting of the right hemidiaphragm with generalized volume loss of the right lung (see Figure 2). A pleural stripe extended along the lateral aspect of the right chest from the diaphragm to the apex with apical fibrosis. There was right lateral deviation of the trachea.

Computerized tomographic examination of the chest showed extensive cavitary, infiltrative and atelectatic changes with loss of volume over the right lung field (see Figure 3). Radiographs of the spine were read as normal.

From the Division of Infectious Diseases, University Medical Center, Jackson, MS.

Laboratory data included: Hgb 9.3 g/dl, Hct 30.5%, WBC 19,400/mm3 (75% polymorphonuclear leukocytes, 15% lymphocytes, 1% eosinophils, 3% basophils, 6% monocytes), CPK 117 mg/dl, ALK phos 349 mg/dl, BUN 10 mg/dl and Cr 0.8 mg/dl.

Wet prep, Ziehl-Neilson and gram stains were performed on material from draining chest wall lesions and expectorated sputum. Gram stain of material from chest wall lesions showed numerous polymorphonuclear leukocytes and Gram positive cocci resembling *Staphylococci*. Gram stain of sputum revealed sheets of polymorphonuclear leukocytes with numerous Gram positive beaded filaments (see Figure 4).

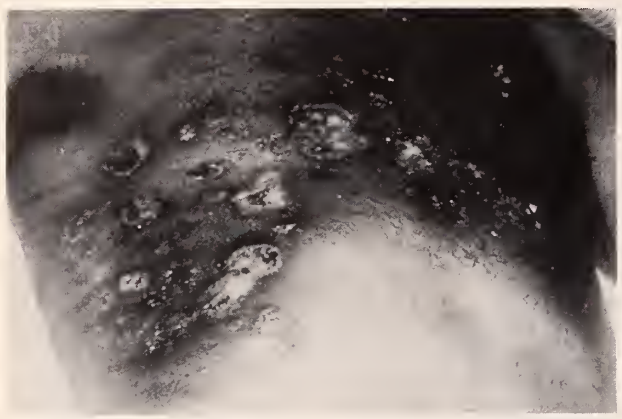


Figure 1: Photograph of patient's chest taken at the time of admission showing numerous draining sinus tracts.

The clinical diagnosis on admission was thoracic actinomycosis complicated by spinal cord compression. An emergency myelogram was performed that showed complete block of cerebrospinal fluid flow at the T6 level. He was taken to surgery where a T3 through T7 decompressive laminectomy was performed. At surgery a firm, rubbery, yellowish mass was encountered upon removal of the lamina. Specimens of this mass sent for pathological evaluation revealed the typical sulphur granules of actinomycosis (see Figure 5). Cultures for fungus, tuberculosis, routine aerobic and anaerobic were all without growth.

Postoperatively the patient was begun on 18 million units of intravenous penicillin G daily for a

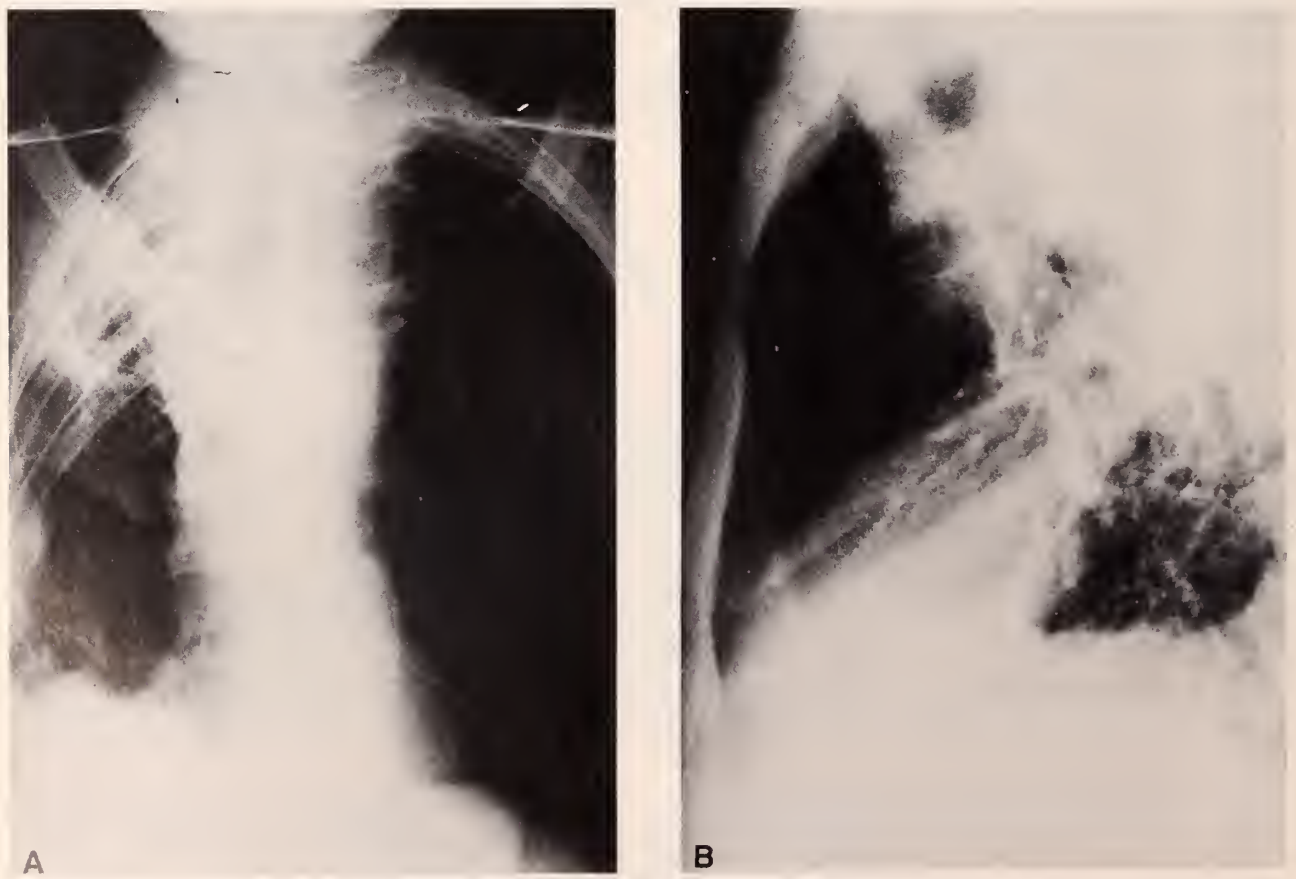


Figure 2: Posterior-anterior (A) and lateral chest (B) radiographs taken at admission showing right apical consolidation, blunting of the right hemi-diaphragm and generalized volume loss of the right lung.

total of six weeks. He showed rapid improvement of his skin lesions and gradual return of lower extremity strength to the point he could walk without assistance at the time of discharge. Upon discharge he was begun on oral therapy with penicillin G 500 mg every six hours and probenecid 500 mg every six hours. Follow up at three months post-discharge from the hospital shows continued improvement with near total resolution of skin lesions. He will continue oral therapy for nine to twelve months.

Discussion

Human actinomycosis is caused by gram positive anaerobic branching filamentous bacteria of the family *Actinomycetaceae*. They are generally non-acid-fast and may be catalase positive or negative Closely related to the *Mycobacteriaceae* and the *Streptomycetaceae*, there are six recognized species: *Actinomyces bovis, A. israelii, A. meyeri, A naeslundi, A. odontolyticus,* and *A. viscosis*. *A. israelii* is the predominant human pathogen with the remainder cited as infrequent causes of human disease.[1]

Clinically actinomycosis involves three anatomic regions: cervicofacial, abdominal and thoracic. Thoracic diseases accounts for 15-30% of the cases.[1-3] The incidence of thoracic actinomycosis is unknown but it is uncommon, with only an average of forty cases reported from Great Britain yearly.[5]

The organisms exist as normal inhabitants of the oral cavity and have been isolated from a variety of sites in the mouth. Increased rates of carriage are associated with poor oral hygiene and carious teeth. The organism has not been isolated from nature so that oral carriage is a prerequisite for disease. The organism does not invade normal mucosal surfaces and requires antecedant trauma to these surfaces to produce disease. Thoracic actinomycosis usually occurs in the setting of aspiration of oral secretions.[6]

The classic presentation of thoracic actinomycosis is that of a pulmonary infiltrate with rib erosions on chest radiograph associated with sinus tracts draining purulent material and sulphur granules through the chest wall. It has, however, presented as an asymptomatic solitary pulmonary nodule or with symptoms referrable to primary pleural or mediastinal disease without draining sinus tracts. It may also occur due to direct extension from cervicofacial or abdominal disease.[7]

Symptoms may be acute or chronic. Pain, the most common presenting symptom, may be pleuritic in nature or a dull retrosternal ache if the mediastinum is involved. Pain may also be associated with tender chest wall lesions. Cough with purulent

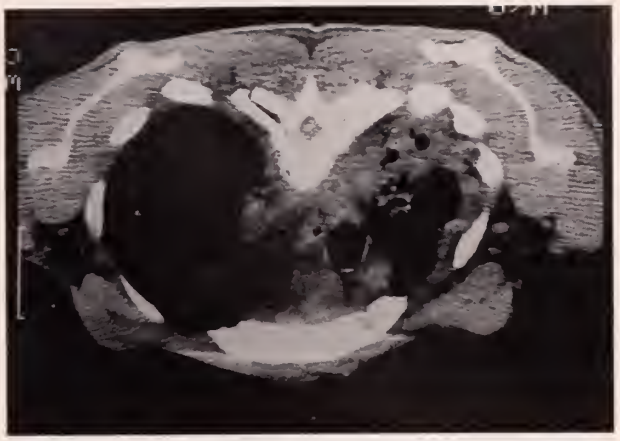


Figure 3: Computerized tomographic examination of the chest showing extensive cavitary, infiltrative and atelectatic changes with volume loss over the right lung field.

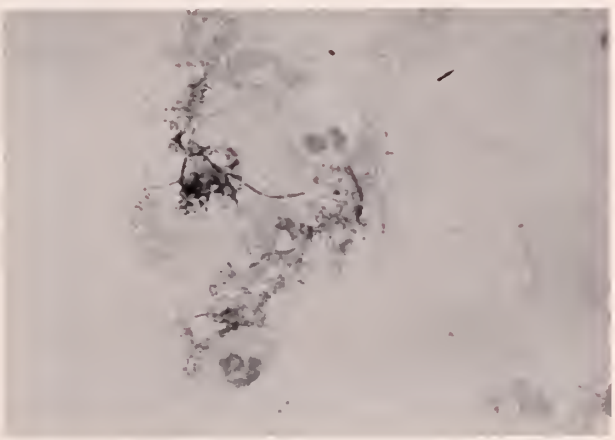


Figure 4: Photomicrograph of gram stain of expectorated sputum showing gram positive beaded filaments (×1000).



Figure 5: Photomicrograph of tissue specimen obtained at laminectomy showing a sulphur granule (hematoxylin and eosin ×500).

sputum occurs at some stage of the disease, but hemoptysis is thought to be unusual. Fever, weight loss and malaise are also reported. Laboratory tests are of little value in diagnosis. Elevation of leukocyte counts, anemia and elevations of erythrocyte sedimentation rates are variable findings and of little help in excluding disease.[7]

The only physical sign that could be considered diagnostic is the chest wall sinus. The sinuses are generally multiple, tend to heal over for a few days and then break down to drain purulent material with characteristic sulphur granules that may be visible to the naked eye. Granulation tissue surrounding the sinus is usually exuberant, vascular and painful to touch. Signs of pulmonary consolidation may be present upon auscultation of the chest.[7]

Although the clinical syndrome of classical thoracic actinomycosis may be quite dramatic, the correct diagnosis is frequently not considered upon initial presentation. Brown reported a retrospective study of 181 patients with all forms of actinomycosis; of 40 patients with thoracic disease, only three were diagnosed correctly at presentation.[4] Weese and Smith reported 57 cases of actinomycosis (10 thoracic) in which the correct diagnosis was considered initially in less that 10%.[3] In the absence of draining chest wall sinuses, disease is easily mistaken for other types of bacterial pneumonitis, fungal pneumonitis, tuberculosis, neoplasia or lung abscess. Even when clinical suspicion is high the disease may be difficult to diagnose.[4]

Vertebral column involvement by actinomycosis is rare with fewer than 80 cases reported in the world literature. The majority of cases were a result of direct extension from widespread thoracic or abdominal disease. The vast majority were reported from the pre-antibiotic era, were asymptomatic and discovered at autopsy. In most cases symptoms of abdominal or pulmonary involvement overwhelmed the clinical picture and obscurred symptoms of vertebral infection.[7-16] Frequently vertebral actinomycosis was mistaken for Pott's disease but specific radiographic abnormalities may sometimes distinguish the two. In actinomycosis the body of several vertebrae are frequently involved along with adjacent ribs, pedicles, spines and lamina. The anterior surface of the body may take on a sawtooth appearance and the intervertebral disc is usually spared.[11]

For reasons unknown, spinal cord compression is a rare complication of vertebral involvement even in the face of extensive involvement of multiple vertebrae. We could find only eleven other cases reported in the literature. Eight are from the pre-antibiotic era and include three cases arising from a primary focus of thoracic disease.[8-12, 16] Three more recent cases are all of thoracic origin. Lane reported two cases of thoracic disease with spinal cord compression that presented with insidious onset of lower extremity weakness and parasthesias. Myelograms in both cases showed partial obstruction to flow of cerebrospinal fluid. These patients were treated with steroids and antibiotics without surgery and both were cured.[14] Kannagara reported one case of thoracic disease with spinal cord compression that manifested as the abrupt onset of paraplegia associated with spinal epidural abscess. This patient required surgical decompression and had a favorable outcome following long term antibiotic therapy.[13] Based on these limited number of cases it would seem that indications for surgical intervention would include acuteness of symptoms, myelographic findings and presence of abscess requiring drainage.

Diagnosis is based on growth of the organism in culture or demonstration of the characteristic sulphur granules from surgical specimens or the draining sinus tracts. Successful isolation in culture requires culturing multiple samples in enriched media under anaerobic conditions in the presence of carbon dioxide. The organism may require five to ten days to grow in culture and is easily missed if the microbiology laboratory is not alerted to hold cultures a sufficient time to allow isolation. Brown reported isolation of the organism in 16 of 67 cultured cases (24%),[4] while Weese and Smith reported positive cultures in 34 of 56 cases (67%).[3]

Sulphur granules are aggregates of microorganisms with surrounding inflammatory debris. They may be macroscopic or microscopic and are yellow to white in color. When examined microscopically they consist of dense rosettes of club-shaped filaments in radial arrangement. They are gram positive and usually non-acid fast. In hematoxylin and eosin stained specimens the core of the granule is basophilic with an eosinophilic periphery. Once thought pathognomonic of actinomycosis, sulphur granules have been associated with infections caused by *Nocardia sp*, staphylococcal botryomyosis fungal mycetoma and *Streptomyces*. In Brown's series of 181 patients, one-fourth demonstrated only one granule in lesions examined. This stresses the need for examination of multiple specimens.[4]

Penicillin has been long considered the drug of choice for treatment of actinomycosis. All strains of *Actinomyces* that have been tested *in vitro* are susceptible to penicillin. Tetracycline and erythromycin are also quite active *in vitro* against *Actinomyces* and are useful alternatives in patients who

fail on penicillin therapy or are penicillin allergic. Lincomycin and clindamycin are also active but are associated with a higher incidence of adverse side effects. Emergence of *in vitro* resistance to sulfonamides limits their clinical usefulness.[17] High dose penicillin therapy must be continued for long periods of time to penetrate antibiotic resistant sulfur granules. It is recommended that 10-20 million units of intravenous penicillin be given daily for a minimum of six to eight weeks. This should be followed by oral therapy for extended periods up to one year. In addition to spinal cord compression, surgery may be necessary for adequate drainage of empyemas or abscesses. Successful outcome of therapy can be expected in greater than 90% of cases.[18] ★★★

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Acknowledgments

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SPECIAL ARTICLE

Collective Negotiation and Antitrust: Part 3

Antitrust Laws and Your Practice

BELOW are several examples of situations involving fees and reimbursement that physicians may experience, together with a brief explanation of their probable antitrust ramifications. All the facts of a particular situation are very important in antitrust analysis. Small changes in facts can lead to different results. So these examples are presented only to give a basic idea of how the antitrust laws work. A physician always should consult a specialist in health-antitrust law before undertaking specific activity involving competitors and fees.

1. *Ten independently practicing physicians in a city of over 350 physicians agree to increase the price of an office visit by 10%.* This is a *"naked"* price-fixing agreement that is *per se* illegal.

2. *The same ten physicians agree to form a professional medical corporation and practice together for all purposes. They then agree to charge $75 for an office visit.* Assuming the group does not include all or most of the members of a particular specialty in the area, this arrangement raises no antitrust problem. Because the physicians have fully integrated their practices through the professional corporation and thus are a single medical practice, their agreement about fees is not "concerted action" for antitrust purposes. However, physicians must be careful not to include too large a percentage of the physicians in an area within the integrated practice.

3. *After the formation of their medical corporation, the corporation's business manager meets with the business manager of another group practice, and they agree to increase their groups' fees by 5%.* This is a naked price-fixing agreement that is *per se* illegal. The business manager and the corporation could be indicted. If the business managers were acting at the direction of the physician-shareholders, the physicians probably would be indicted also.

4. *Members of the local medical society agree that they will not participate in an insurance plan unless the plan increases reimbursement by 10%.* This is a "group boycott to enforce a price-fixing agreement" and is *per se* illegal.

5. *During a discussion of a proposed HMO agreement at a medical society meeting, four physicians separately say that they don't care what the others plan to do but that they will not participate unless the payor increases reimbursement. Subsequently, only five members of the medical society's 120 members sign agreements.* This is a possible group boycott case. If the medical society and its members were sued, a jury could (but would not be required to) find that the physicians agreed not to participate unless reimbursement were increased. If an agreement were found, it would be *per se* illegal.

6. *After its members receive a proposal from an HMO, the local medical society hires a consultant to analyze the meaning of contractual provisions and provide a written report to the members without recommending whether they should participate. After studying the report and without discussing among themselves their intent to participate, no member participates.* There should be no antitrust violation on these facts because there is no agreement not to participate. A plaintiff could, however, ask a jury to infer that the physicians agreed not to participate at a medical society meeting or elsewhere or that the consultant signaled the physicians not to participate through the nature of his analysis.

7. *Same as six except that the consultant recommends, in very precise advice but without reference to specific fees, what changes the medical*

Reprinted from a brochure published by the American Medical Association, Chicago, IL.

society should seek. The answer is the same as long as there is no threat of boycott by the medical society or its members.

8. *Same as six except that the consultant advises the members not to sign the contracts, and only a few sign*. Although technically there is no violation on these facts alone, recommendations from *anyone* not to participate are extremely dangerous and *always* should be avoided. Each physician should make his or her decision independently and not base that decision on the recommendation of others or on whether others intend to participate

9. *Same as six except that the medical society authorizes the consultant to present the report to — and discuss it with — the insurer with the hope of increasing reimbursement*. On these facts alone, there is no violation. If, however, the consultant states or suggests to the insurer that medical society members might not participate unless reimbursement is increased, an agreement among the members not to participate could be inferred. This activity should never be undertaken without advice of counsel.

10. *After reviewing an insurer's proposal, members of a medical society object to it because the claims forms would be burdensome to complete and the utilization review program would involve too much "red tape." They do not wish to participate unless these problems are solved*. The physicians should not threaten a group boycott as a means of changing the insurer's proposal. The physicians' problems probably could be solved in a way that would present little antitrust risk by explaining the problem to the insurance company. Legal advice should be sought to accomplish this with minimal antitrust risk.

11. *Because their malpractice insurance rates increased by 58% last year, several independently practicing obstetricians in town agree to raise their fees by 2%*. This is a naked price-fixing agreement. Remember, there is *no permitted justification* for a naked price-fixing agreement. An agreement as to reasonable fees is just as illegal as an agreement as too outrageously high fees.

12. *Several physicians in town agree to discount their fees by 10% to indigent patients as a public service*. Technically, this is a *per se* illegal price-fixing agreement. However, because of its public service aspects, the government is unlikely to challenge it. The safest course would be to obtain an advisory opinion in which the government indicates its intention not to sue. Because there are no potential private plaintiffs who would be injured by this agreement, there should be no concern regarding private antitrust litigation.

13. *To circumvent the antitrust law prohibitions of price-fixing, a medical society establishes itself as a "union" and then attempts to bargain collectively with third-party payors*. Although there is a "labor exemption" to the antitrust laws, the exemption applies only to collective bargaining by employees and not to collective bargaining by independently practicing professionals. Thus, the *very same rules* apply to the medical society's union as would apply had the union not been formed. That a physician has signed an employment contract with a professional medical corporation does not mean that the physician is an "employee"of a hospital, HMO, or insurance company for purposes of the labor exemption. If the physicians were to "strike" or to threaten some "job action" unless reimbursement were increased, a *per se* violation would result.

14. *A number of competing physicians in town agree to charge interest on bills not paid within 90 days of the date services are rendered*. This is a *per se* illegal price-fixing agreement. "Price," for purposes of the antitrust laws, includes any factor relating to the final cost of the service of the patient. For example, "price" includes discounts, terms of credit, relative value guides and their conversion factors, balance billing, copayment amounts, interest rates on unpaid bills, and the like.

15. *A number of physicians in town who previously had seen patients on Saturdays and some evenings agree not to open their practices at these times*. Because the hours a business is open is a competitive factor, this sort of agreement raises antitrust concerns. In fact, the Federal Trade Commission recently decided that an agreement among competitors to close at certain times is an antitrust violation. Of course, any physician or any medical group is free independently to determine their hours of practice.

16. *Because of several conflicts between physicians and patients about the reasonableness of fees charged by its members, the local medical society establishes a peer review program to assess the reasonableness of particular fees charged by its members*. Peer review programs to review the reasonableness of individual fees are lawful under the antitrust laws if they have certain characteristics. Most importantly, decisions as to what constitutes a reasonable fee in particular situations should not be disseminated to other society members. In addition, any attempt to discipline members whose fees it thinks are too high increases the level of antitrust risk. Any peer review activities of this na-

ture should not be undertaken without the advice of counsel.

17. *A PPO approaches the local medical society and asks it to develop a fee schedule that the PPO might use in reimbursing society members for services rendered to the PPO's subscribers.* The medical society should not undertake this activity. The PPO should negotiate a fee arrangement with each physician individually or develop a fee schedule (with the assistance of a consultant, if necessary) to be offered to physicians. The physicians could then unilaterally decide whether to participate on the basis of the proposed fee schedule.

18. *A PPO approaches the medical society and requests that it collect fee information from its physicians and provide the PPO with its members' average charges (or other statistical measures) for particular services.* This activity can be undertaken within the antitrust laws if certain guidelines are followed. In particular, the information should be collected and the statistics computed by someone other than a competing physician — an executive director or outside accountant, for example. Most importantly, society members should not have access to information relating to the fees charged by their competitors. The statistics should not be disseminated to society members generally.

19. *Thirty percent of the physicians in town form an IPA but continue to practice independently with respect to their private patients. They invest start-up capital and market the services of the IPA to area HMOs, employers and insurance companies. In marketing the practice, they develop a fee schedule.* Although the law is not crystal clear on this, a violation is highly unlikely. Although these physicians have jointly established a price which they are charging, this fee schedule is an integral part of a procompetitive partially integrated venture. It should therefore be judged under the rule of reason and should be held on balance to be procompetitive.

20. *The physicians in nineteen all charge all of their patients and payors, including those not associated with the IPA, according to the fee schedule they developed.* This is a *per se* illegal price-fixing agreement.

21. *To preempt the entry of an HMO that plans to enter the area, the local medical society forms a PPO that will include about 70% of area physicians. Each participating physician must agree not to participate in other managed-care plans.* The PPO's formation and operation could lead to an antitrust investigation and might involve an antitrust violation. The problem here is the medical society's intent to preempt competition and the anticompetitive impact of the inability of participating physicians to provide services to other plans.

22. *To increase its members' volume of patients, a local medical society forms a PPO, which includes about 20% of area physicians. The PPO includes all cardiologists in the area because participation by all will be necessary to serve the number of subscribers the PPO expects to sign up.* The formation of the PPO is probably lawful. While all cardiologists are members, this may be justifiable on procompetitive grounds. Because the PPO includes all the practitioners in a particular specialty, the safest course would be to request an advisory opinion from a government agency.

23. *After a third-party payor sends a proposed contract to the physicians in town, the local medical society meets to discuss its strengths and weaknesses. Several physicians state that they believe the proposed reimbursement is too low because it is lower than other third-party payors are currently paying. No physician suggests, at the meeting or in private conversations with other physicians, whether he or she intends to participate. Ultimately, only two physicians sign contracts.* There should be no violation of the antitrust laws on the facts stated. A plaintiff could, however, ask a jury to infer that there was an agreement to boycott the payor. Slight changes in the facts, moreover, could result in a "naked" group boycott to enforce a price-fixing agreement. Meetings such as this should never be held without the advice and presence of counsel.

24. *The medical society in twenty-three approaches the payor following the meeting of its members. The society reports that some of its members consider the proposed reimbursement to be too low, and explains why. The medical society does not threaten that its members will boycott the payor, and in fact affirmatively states that each physician will independently decide whether to participate.* An action such as this carries substantial antitrust risk, but is lawful if done properly. It is absolutely essential that competent counsel be involved in every step of this process.

25. *Unhappy that a third-party payor's proposal would not provide reimbursement for eye examinations, an ophthalmologist writes a letter to all other ophthalmologists in an area urging them not to sign participation agreements unless eye examinations are reimbursed. No ophthalmologist signs a participation agreement.* Depending on all the facts, a jury *could* find an agreement not to participate. Any such agreement is likely to violate the antitrust laws.

26. *The state medical association and its con-*

stituent local medical societies lobby the state to increase Medicaid reimbursement by speaking with legislators and presenting testimony at legislative hearings. As a direct result of these efforts, the state increases Medicaid reimbursement. Regardless of their effect, lobbying activities are exempt from successful antitrust challenge. There are limits, however, to this exemption as the next two examples show.

27. *At first the physicians' lobbying efforts fail. The state medical society, after obtaining authority from its members, then writes the state, telling it that its members will "departicipate" from the Medicaid program if reimbursement is not increased. The state increases Medicaid reimbursement.* This may be an illegal group boycott to enforce a price-fixing agreement. There is some confusion in the law, however, because one court has held that the First Amendment may protect the boycott if the state's decision resulted from "political" persuasion rather than from "economic" coercion. The U.S. Supreme Court has agreed to review that decision.

28. *The state medical association learns that the state intends to decrease Medicaid reimbursement. It decides that a suit challenging the decrease could succeed, but is unlikely to do so. Knowing that filing a suit may delay the decrease, it files suit.* The agreement to file this suit is protected by the First Amendment to the United States Constitution. However, "sham" litigation conducted in bad faith for anticompetitive reasons is not protected, and may be subject to antitrust challenge.

29. *Gastroenterology groups A and B, which are competitors, decide to merge. Group A provides about 20% of all gastroenterology services in the area, and group B provides about 25%.* The merger may be illegal because the merged group could have substantial "market power." Many other factors, however, would have to be examined before a definitive conclusion could be reached.

30. *A physician sees a referral patient for the purpose of providing a second opinion. The patient asks this physician to replace his or her prior physician as the treating physician. The second physician declines.* Every physician has the right to choose the patients he or she will treat. However, if a physician declines to accept a patient because of an *agreement*, no matter how silent or informal, that physicians in an area will not "steal" the others' patients, then an antitrust violation may be present. Physicians must independently decide whether to accept a particular patient without any "agreement" with competing physicians.

31. *A physician applies for staff privileges at a hospital. The review committee recommends that privileges be denied based upon an objective analysis of the physician's credentials. The hospital accepts the committee's recommendation and denies privileges.* On these facts, no antitrust problem whatsoever. As long as peer review decisions are made in good faith and for objective reasons, there is little antitrust risk involved. In a letter to the AMA, the head of the Antitrust Division of the Justice Department made the following comments concerning peer review:

"A hospital may legitimately decide to deny privileges to an incompetent practitioner, based on good faith peer review conducted by the medical staff. Although the denial of privileges might make it difficult or even impossible for the practitioner to engage in his profession, such a denial does not impair competition. Rather, because the denial will enhance the quality and efficiency of health care and thereby strengthen the hospital's competitive position, peer review serves the underlying goals of the antitrust laws." Although peer review is a legitimate activity, it can be abused. Peer review decisions which are made for competitive reasons, such as to exclude a competing surgeon from the area, may constitute antitrust violations.

Conclusion

As the variety of examples above indicates, potential antitrust violations relating to anticompetitive agreements among physicians can arise in many different contexts. Moreover, seemingly small and insignificant changes in facts can lead to different and sometimes opposite results. Finally, antitrust problems can arise quite innocently, without the physicians involved realizing a problem exists until it is too late to solve it.

Because of this and the substantial adverse effects that antitrust investigations and litigation can have on physicians, physicians should exercise great care before participating in any activities with other physicians regarding fees or reimbursement. Especially in light of the Department of Justice's announced intent to prosecute physicians criminally for price-fixing violations in some circumstances, the American Medical Association is making a strenuous affirmative effort to ensure that physicians learn as much as possible about permissible and prohibited activities under the antitrust laws. For more information contact the Physician Negotiation Advisory Office at (312) 645-6546. ★★★

9L173

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TEST PARAMETERS: The design of the test stipulates that bonuses be offered in certain geographic areas. To qualify, applicants must reside within those areas at the time of accession.

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Taking Care of Our Own

We, in medicine, are often accused by some of taking care of our own. We are even accused of protecting our own to the point of dishonesty. (''You can't get a doctor to testify against another doctor.'')

Judging from the advertisements in the trial lawyers' publications, there seems to be no shortage of ''hired guns'' (who can testify on either side of an issue depending upon the financial reward). There also are those who make their living trying to find fault with almost any case that results in a bad outcome — seldom related to negligence.

However, the fact is we physicians are the most well-regulated and self-regulated (that is peer review) of all professions and/or businesses. We have excellent practitioners doing peer review regularly with protection of the public and good patient care being their primary incentive. It is well known in Mississippi that we regulate our profession in a very highly professional manner and with great integrity.

So you see, we are self-regulated and also attacked by our own (or at least those who claim to be our own), creating a practice environment that has opposing incentives in that we are to leave no room for error, yet practice cost effective medicine.

Reflecting on the themes of sharing and caring during the recent Christmas season and stimulated by a mail-out to all MSMA physicians from the MSMA Impaired Physicians Program, I wondered how well we ''really take care of our own.'' It seems that one of our best kept secrets and one that receives (and probably should not) no media attention or publicity is our Impaired Physicians Program.

Our program in Mississippi is recognized as one of the most successful programs for professional self-help in the country. Some 192 Mississippi doctors have been treated and returned to their patients and their loved ones since the program was implemented in 1978, and 89 doctors are presently in the program.

So in a way that really counts and has long term and immeasurable results, let us make a genuine commitment to support our Caduceus Club with a check and an annual contribution. If our members alone made a small contribution, for instance $20.00 a year, the program would be financially secure. However, if all licensed physicians (and it is their duty and responsibilities a la Hippocrates) made that contribution, our Impaired Physicians Program would be the best financed in the United States.

Please consider making that commitment today. Make checks payable to MSMA Impaired Physician Program, 735 Riverside Drive, Jackson, Mississippi 39202-1166. Remember, these are tax deductible contributions.

Take care of your own.

EDITORIALS

JOURNAL OF THE
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MEDICAL ASSOCIATION
VOLUME XXXI, NUMBER 2
FEBRUARY 1990

Strange Fish

On a lazy afternoon recently, I contemplated my last diving expedition. The Great Barrier Reef, off the northeast coast of Australia, was a thrilling experience with all the crystal blue water of the Coral Sea; what seemed like almost unlimited visibility underwater; the huge manta rays, sharks, and other large pelagic fish; riding out the tail of a hurricane with 30-foot waves; and those other eleven doctors who composed the visitors to that deserted and otherwise unsuspecting part of the world. I had always dreamed of going to all those exotic places to dive like this huge reef, Truk Lagoon, and the Galapagos Islands. For me this was the ultimate.

As a diver, I enjoyed the three and four SCUBA dives daily as well as the night dives. As a doctor, it was interesting to hear how the practice of medicine varies in the other four corners of these United States. In a previous editorial I had mentioned how Jacques Cousteau, in his antiquity, had inspired me to continue diving in my "old age." Well believe me, I was not the only one he inspired — for we looked like the over-the-hill gang had gone diving. All had some grey in their hair and about half were over 65 years old — I was one of the youngsters.

I'm not sure how I came out, but somehow my experience with treating colds, sore throats, and pinworm infestations did not seem as unique as the dermatologist whose practice was limited to liposuction; the orthopedist whose practice was totally limited to joint replacement; the neurologist whose sole source of income was testifying in court cases; the weight reduction expert; or the neurosurgeon who had developed an electrical stimulating device for neuro-psychiatric pain — sort of a super TENS unit.

In my usual role of ambassador for Mississippi when I travel, I did my best to lay the good side of Mississippi on them. I even had to tell them about my catfish pond where the fish are so big you have to throw out an anchor otherwise when you catch them they'll pull you around the lake. Well, anyway, my sore throat treatments may not have excited them, but when those twelve days were over:

1. They knew where Mississippi was.
2. They knew we are not a bunch of bumbling idiots down here.
3. They knew where my catfish pond was and all wanted one like it, or wanted to fish in mine.
4. They were wearing Mississippi T-shirts and pins.

In my next life, I think I shall return much younger and as a qualified acupuncturist with a sub-specialty in family counseling. Maybe then I can afford to go to the rest of those beautiful, expensive dive spots on my list.

Thank God I'm a physician in this exotic world of exotic doctors.

JOE JOHNSTON, M.D.
Associate Editor

Mark Your Calendar Now!
MSMA's 122nd Annual Session
May 30-June 3, 1990

Coliseum Ramada Inn
Jackson, MS

Medico-Legal Brief

Physician Owes Duty to Other Persons When He Administers Drugs to Patients

A physician may be liable to a man who was injured by an automobile that was driven by his patient to whom he had administered drugs that caused drowsiness, the New Mexico Supreme Court ruled.

The patient was suffering from a debilitating migraine headache. She saw the physician and complained that the Percodan he had earlier prescribed was not helping. The physician then injected meperidine, a narcotic analgesic. When the patient complained of nausea, he administered a second drug to combat it. Approximately an hour later, when the patient was driving an automobile, she struck and injured a man.

The accident victim filed suit against the patient and the patient's physician. The federal trial court certified questions to the state supreme court on whether a physician had a legal duty to non-patients who may be harmed by his treatment of a patient.

The supreme court said that the physician had a legal duty to use reasonable care in treating the patient and that duty extended to the driving public when he administered drugs known to cause drowsiness and impairment of judgment. Whether the physician adequately warned his patient of adverse reactions that may affect her driving ability was a question of fact for the jury.

In addition, the court ruled that the Medical Malpractice Act applied to the claim against the physician by the non-patient.—*Wilschinsky v. Medina*, 775 P.2d 713 (N.M.Sup.Ct., June 29, 1989)

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. $12.95. 1989.

Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions. (Report of the U.S. Preventive Services Task Force). Michael Fisher, Editor. Williams & Wilkins, Baltimore. 1989.

Advocation of Compassion: The Mississippi Physician and Creative Writing. Compiled and edited by Charles Whitley Emerson, III. $15.95. 1989.

122nd Annual Session

May 30-June 3, 1990

Jackson, Mississippi

Mark Your Calendar Now!

Legislative Forum Held in Jackson

The MSMA, Mississippi Hospital Association, and the Mississippi Association of Hospital Governing Boards cosponsored a Legislative Forum January 18 in Jackson. The day included a special session of the MSMA House of Delegates, a joint meeting of MSMA/MHA, and a reception for legislators.

Delegates heard an overview of MSMA's legislative package, which includes four proposals that have been introduced and referred to committees. The legislative proposals are: (1) a bill to establish basic qualifications for expert witnesses in medical liability cases; (2) a bill to provide a medical liability incentive for participation in the Medicaid program; (3) a proposal to require certification of an entity conducting utilization, claims and/or pre-admission review and to set certain standards and procedures (through the State Department of Health) for the conducting of such review programs, and also to require physician involvement in utilization review; and (4) a bill to create the "Durable Power of Attorney for Health Care Act" to permit a person to designate a family member or someone else to make health care decisions for them in the event of their incapacitation.

Guest speakers included Congressman Mike Parker, Dr. Jerald Schenken of the AMA's Board of Trustees, and Jim Carlson of Oregon Medical Association. Dr. Clinton Smith, director of the Mississippi Division of Medicaid, moderated a panel discussion on "Care of the Medically Needy in Mississippi" which included MSMA President Dr. Ed Hill, David Bussone, director of the University Hospital, Representative Ed Buelow, chairman of the House Public Health Committee and Senator Robert Huggins, chairman of the Senate Public Health Committee. Clare Elliott, director of legislative activities for MSMA, Bucky Murphy of Corporate Relations Management of Jackson, and Sam Cameron, president of the Mississippi Hospital Association, presented an update on Mississippi health care legislation.



A reception for legislators was a highlight of the MSMA/MHA Leadership Conference/Legislative Forum held January 18 in Jackson.



Dr. Jerry Schenken, a member of the AMA Board of Trustees, was guest speaker at a special session of the MSMA House of Delegates held in conjunction with the January 18 Legislative Forum.



MSMA members, representatives of the Mississippi Hospital Association, and legislators gathered at the Ramada Renaissance Hotel in Jackson on January 18 for a Leadership Conference/Legislative Forum.



Above, Dr. Clinton Smith, director of Mississippi Division of Medicaid, moderated a panel discussion on care of the medically needy during the Leadership Conference/ Legislative Forum.

Below, Jim Carlson, assistant director of public affairs for the Oregon Medical Association, discussed that state's program for prioritizing Medicaid benefits.



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MSMA Members Receive Physicians' Recognition Award

Three MSMA members were named recipients of the AMA Physicians' Recognition Award during November and December. They are: Drs. James Walter Holmes of Wiggins, Edward K. Gore of Houston, and Gilbert R. Mason of Biloxi.

Physicians can receive the PRA certificate valid for one, two or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours of CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1.

PERSONALS

JAMES G. ADAMS of Cleveland has associated with Cleveland Clinic for the general practice of medicine.

W. RAY CALLENDER has associated with Family Medical Clinic in D'Iberville for the practice of family medicine.

JOE S. COVINGTON of Meridian announces his retirement from office practice with Internal Medicine Associates, P.A.

KEN CARGILE of New Albany has been elected chief of staff at Baptist Memorial Hospital of Union County.

J. ROBERT COLTHARP and LARRY DAY of Hattiesburg announce that Ear Nose and Throat and Facial Plastic Surgery, P.A. has received a three-year accreditation by the Accreditation Association for Ambulatory Health Care, Inc.

J. BERT DAVIS of Jackson has been named a fellow of the American Academy of Facial Plastic and Reconstructive Surgery.

JAMES W. ERVIN, JR., has associated with The Street Clinic of Vicksburg for the practice of family medicine.

OWEN EVANS of UMC spoke at the Pediatricians and Family Practitioners meeting in Indianola, served as a panel member at the Muscular Dystrophy Association meeting in Nashville, and attended the American Board of Psychiatry and Neurology meeting in Boston.

NOLLIE C. FELTS, JR. announces the association of his medical practice with Hattiesburg Clinic West, 104 Millsaps Drive in Hattiesburg.

SETHELLE L. FLOWERS announces the opening of her office for the practice of dermatology at 415 Highway 51 South in Ridgeland.

RICHARD T. FURR of Ocean Springs has been recertified as a diplomate of the American Board of Family Practice.

JUDITH GORE GEARHART of Clinton has been recertified as a diplomate of the American Board of Family Practice.

H. ALLEN GERSH of Hattiesburg has been named to the Advisory Board of the Bank of Hattiesburg.



PERSONALS/Continued

JAMES P. GUERRIERO of Vicksburg was honored with a retirement reception hosted by Mercy Regional Medical Center and The Street Clinic.

JAMES R. HALTOM is now associated fulltime with Mississippi Asthma and Allergy Clinic, P.A. in Jackson.

J. R. HEIGH received the Philadelphia Sertoma Club's 1989-90 "Service to Mankind" award.

HERBERT LANGFORD of UMC presented a lecture on nutritional aspects of hypertension at Belhaven College in Jackson.

RODNEY N. LOVITT of Petal has been recertified by the American Academy of Family Practice.

BILL F. MADDOX and WESLEY D. MARNER have associated with The Hollandale Clinic for the practice of family medicine.

DON Q. MITCHELL of Jackson was honored by the Mississippi Air National Guard with a special ceremony upon his retirement after twenty years of military service.

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Symposium
Management of the Newly Diagnosed Breast Cancer Patient
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FRANCIS S. MORRISON of UMC participated in the activities of the Coordinating Committee of the National Blood Resources program in Bethesda, Maryland, and delivered a lecture to a Symposium of Mississippi Gulf Coast Blood Bankers at Gulf Coast Community Hospital.

HARRIET MURPHY of Gulfport was named 1989 Woman of the Year by the Center for Women's Health.

SESHADRI RAJU of UMC made a presentation at the 16th Annual Monteflore-Einstein Symposium in New York City.

CARL M. REDDIX announces the opening of his office for the practice of obstetrics and gynecology at Hinds Professional Building, 1815 Hospital Drive in Jackson.

ROBERT R. RESTER announces his association with NEAL W. BUCKLEY for the practice of family medicine at 820 North State Street in Jackson.

CHARLOTTE BLACK SHAAK has associated with The Children's Clinic of Jackson and Brandon for the practice of pediatrics.

ROBERT R. SMITH of UMC was guest lecturer and visiting professor at Temple University in Philadelphia, Pennsylvania.

C. D. TAYLOR of Pass Christian announces his retirement from the practice of medicine.

WILLIAM M. TEMPLE has associated with BRYAN F. MCCRAW of Columbia for the practice of internal medicine.

F. ED THOMPSON received the John Vick Bailey Award presented by the Mississippi Public Health Association in recognition of outstanding service.

KEITH WAGGONER has associated with Yazoo Medical Clinic, 805 East 15th Street in Yazoo City for the practice of family medicine.

JOE ADAM WARD has opened his office for the practice of family medicine in Monticello.

GARY P. WOOD has associated with Southwest Obstetrics and Gynecology, P.A. and EDSEL F. STEWART of McComb for the practice of obstetrics and gynecology.

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References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. James Clarkson, Secy., P.O. Box 128, Biloxi 39533. Counties: Hancock, Harrison, Stone.

Delta Medical Society. 2nd Wednesday, April and October, Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. Tom Stanford, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Melissa Dockery, Secy., 830 Medical Center Dr., West Point 39773. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. Paul Moore, Jr., Secy., 1214 Farnswort Ave., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society., 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Robert Clingan, Secy., 100 McCauley Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Street
Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Seargeant Prentiss Dr
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
I-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave.
Pascagoula, MS 39567

Greenwood Leflore Hospital
1401 River Rd.
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Baptist Memorial Hospital of North Mississippi
Highway 7, South
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr
Jackson, MS 39216

Delta Medical Center
1400 E. Union
Greenville, MS 39704

Methodist Hospital
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Hattiesburg, MS 39401

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Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis. Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General. Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia. Elevated serum potassium (>5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia. In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension. Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia. Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia. Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions

Hypotension. Patients on Diuretic Therapy. Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release. The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents. VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy – Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use. Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION. The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE. The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular. Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation.

Digestive. Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis, stomatitis.

Musculoskeletal. Muscle cramps.

Nervous/Psychiatric. Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital. Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory. Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin. Herpes zoster, urticaria, pruritus, alopecia, flushing, hyperhidrosis.

Special Senses. Blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgias/arthritis, myalgias, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

Angioedema. Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension. In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen. In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit. Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol.%, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 01% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown). In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

Liver Function Tests. Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension.* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment. The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure. VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Patients with Heart Failure and Renal Impairment or Hyponatremia. In patients with heart failure who have hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure,* WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486

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JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

MARCH 1990



122nd Annual Session • May 30th – June 3rd • Jackson MS

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Standing: (Left to right) Joe S. Covington, M.D., director, internist, Meridian; William A. Whitehead, M.D., director, general surgeon, Hattiesburg; James M. Cooper, M.D., director, anesthesiologist, Tupelo; Ralph L. Brock, M.D., director, family practitioner, McComb; Max L. Pharr, M.D., director, family practitioner, Jackson; John F. Lucas, Jr., M.D., director, general surgeon, Greenwood.

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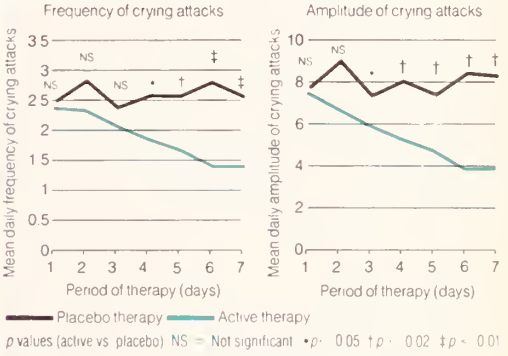
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1 Kanwaljit SS, Jasbir KS Simethicone in the management of infant colic *Practitioner* 1988;232:508

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NEWSLETTER

March 1990

Dear Doctor:

On March 7 the American Medical Association unveiled a 16-point proposal to strengthen and reform the American health care system by improving access to affordable, quality health care services. The proposal, "Health Access America," calls for substantial reforms in the Medicare and Medicaid systems and required employer-provided insurance, with tax incentives and risk pools.

> "We are facing a serious dilemma in this country today because over 30 million of our citizens lack health insurance coverage," said Alan R. Nelson, MD, president of the AMA. The proposal was described as a comprehensive effort to repair the flaws in the nation's health care system while continuing to provide the high quality care that most Americans have always known. Among the strengths of the U.S. system are freedom of choice, individualized patient care, technological advances, a strong research community, and superlative medical education, Dr. Nelson added.

Among the 16 points in the proposal, the AMA calls for changes in the professional liability system, establishing professionally developed practice parameters, and placing the Medicare program on a prefunded basis to avoid projected bankruptcy by the turn of the century. "Health Access America" also proposes to create uniform eligibility standards for Medicaid patients based solely on income below the poverty level and to create a fiscally sound Medicare program.

MSMA members and spouses can hear first-hand about the AMA's "Health Access America" proposal, along with information about other developments in medicine, on Thursday, May 31, when Dr. Nelson addresses the MSMA House of Delegates. The occasion is the opening session of MSMA's 122nd Annual Session, which will continue through June 3 at the Coliseum Ramada Inn in Jackson. Plan now to attend. Watch for more information in upcoming issues of the Journal and in the "MSMA Report."

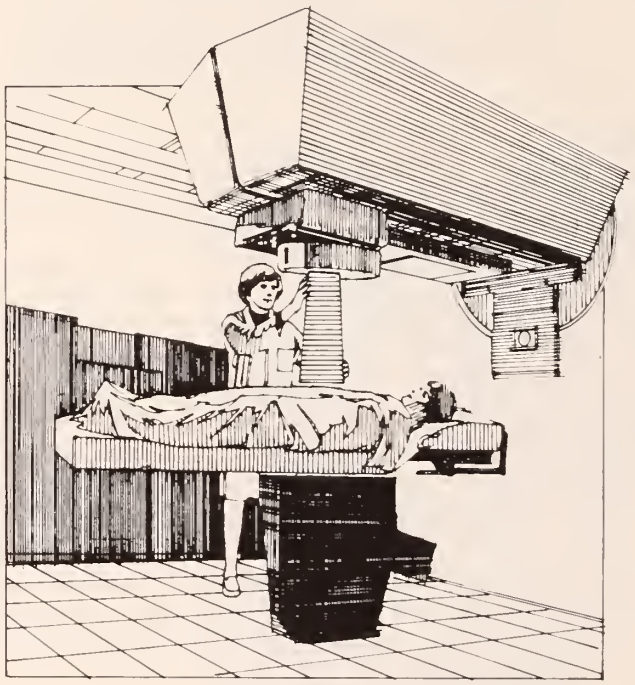
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Patsy S. Twiner
Managing Editor

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DATELINE

Disabled Children Awarded Benefits by Court Ruling

Washington, DC - Hundreds of thousands of disabled children from low-income families may become eligible for welfare benefits under a ruling by the Supreme Court late last month. The justices struck down a government regulation that had made it more difficult for children than for adults to receive payments. Officials estimate 250,000 children under Supplemental Security Income (SSI) will have to be re-evaluated.

MSMA Recognized for AMA Membership Efforts

Chicago, IL - The MSMA received another membership award from the AMA. This is the fourth consecutive year that the association has surpassed its previous year record AMA members. Dr. Hill received a plaque on behalf of the MSMA during the 1990 Leadership National Leadership Conference in February. Making the presentation were AMA president Dr. Alan Nelson and Dr. John Ring, chairman of the AMA Board of Trustees.

Course on Burns Set For May 30 at UMC

Jackson, MS - The Advanced Burn Life Support (ABLS) Provider Course will be offered at the University Medical Center on May 30. Speakers will address initial assessment and management, airway management, transfer and transport, wound management, shock and fluid resuscitation, along with other topics. For more information, please contact Dr. Carol Scott-Conner at UMC's Department of Surgery at 984-5120.

Fewer Physicians Note Patient Alcohol Problems

Chicago, IL - While Americans' per capita alcohol consumption significantly jumped between the 1960s and 1980s, physicians spent less time talking to their patients about cutting down, says a new study in the February Archives of Internal Medicine. In three studies (1967, 1979, and 1984) it was found that physicians' recommendations regarding alcohol use and problem drinking dropped for both male and female patients.

Children Prefer PBS Over Adults' Choices

Chicago, IL - Leave them alone and children will watch more educational television than if their parents were directing what channels they should turn to, concludes a study in the March American Journal of Diseases of Children. The study suggests that children prefer PBS over commercial networks, but when children and parents view TV together, they watch the commercial channels the parents prefer.



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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
March 1990, Volume XXXI, Number 3

ORIGINAL PAPERS

The Shoulder: Part II — Nonoperative Management of Disorders of the Shoulder

DOLPH WOODALL, R.P.T., A.T.C.
F. H. SAVOIE, M.D.
Jackson, Mississippi

MOST PEOPLE will have at least one episode of disabling shoulder pain in a lifetime. This entity is second only to low back pain as the most common cause of orthopaedic patient referral. Although the etiology may vary, many of these problems can be solved by the judicious use of oral medications, injections, and rehabilitation. Except in certain instances (e.g., acute rotator cuff tear in a young athlete), surgery should be considered only when the shoulder has failed to respond to a complete nonoperative management program.

The specifics of examination of the shoulder have been detailed in Part I of this series. Local causes of pain about the shoulder include subacromial bursitis; impingement syndrome; bicipital tendonitis; supraspinatus and rotator cuff tendonitis; partial and complete thickness rotator cuff tears (with or without calcific tendonitis); anterior, superior or posterior labral tears; instability; adhesive capsulitis; and the various arthritic conditions and diseases affecting the shoulder (see Table 1). Although the list is extensive, a medication and therapy program can adequately manage most of these problems. Special diagnostic tests, such as ultrasound, magnetic resonance imaging (MRI), and arthrography may also aid in the delineation of the problem, but are usually reserved for those patients in whom initial treatment has failed.

When a working diagnosis has been made, treatment can be instituted (see Table 2). Initially, a simple program of aspirin, rest, and range of motion exercises in a pain free range is utilized. Failure of this treatment is an indication for nonsteroidal anti-flammatory medications, a short-course corticosteroid (Medrol dose pack) and an anti-inflammatory physical therapy program. Injection of a long acting anesthetic combined with a noncrystalline corticosteroid is also effective, both as a diagnostic test and as an adjunctive management modality. A combination of the aggressive medical and therapy program has proven most effective in our patients.

Injections about the shoulder aid in both diagnosis and management. The use of a local anesthetic may temporarily alleviate an acutely painful shoulder, allowing a more complete examination and localizing the pathology to the area of injection. The addition of a corticosteroid provides direct delivery of anti-inflammatory medication to an inflamed area. The medication should be delivered into the bursa or tendon sheath rather than into the tendon. Intratendinous injections predispose to degeneration and rupture.

The most common site for an injection is into the

From the Department of Orthopaedics, University Center, Jackson, MS.

TABLE 1

LOCAL CAUSES OF SHOULDER PAIN

Subacromial/Subdeltoid Bursitis
Bicipital Tendinitis
Impingement Syndrome
Rotator Cuff Tendinitis
Partial/Full Thickness Rotator Cuff Tear
Calicific Tendonitis
Labral Tear
Instability:
Subluxation
Dislocation
Adhesive Capsulitis
Arthritic Conditions:
Degenerative
Inflammatory

TABLE 2:

OVERVIEW OF COMMON DISORDERS OF THE SHOULDER

Disorder	*Physical Findings*	*Management Stages*
1) Subacromial Bursitis	+ Impingement Test	1) ASA or NSAID 2) Injection[2]/ Therapy 3) Excision— seldom necessary
2) Impingement Syndrome	+ Impingement Test	1) ASA or NSAID 2) Injection[2]/ Therapy 3) Decompression
3) Bicipital Tendinitis	+ Biceps Stress Test	1) ASA or NSAID 2) Inject Shoulder Joint[3] 3) Therapy 4) Tenodesis
4) Rotator Cuff Tendinitis	+ Supraspinatus Stress Test "Painful Arc"	1) ASA or NSAID 2) Therapy 3) Debridement/ Decompression
5) Rotator Cuff Tear	+ Supraspinatus Stress Test Weakness	1) Medication/ Therapy 2) Diagnostic Studies 3) Repair
6) Labral Tear	+ Clunk Test Popping	1) Medication/ Therapy 2) Excision/ Repair
7) Instability	+ Subluxation + Apprehension	1) Rehabilitation 2) Stabilization
8) Adhesive Capsulitis	↓ External Rotation	1) ASA or NSAID 2) Therapy 3) Manipulation
9) Calcific Tendonitis	+ Impingement Test Palpation Painful	1) Injection/ Medication 2) Therapy 3) Arthroscopic Removal
10) Degenerative Arthritis	↓ Global Motion + Crepitation	1) Medication/ Therapy 2) Arthroscopic Debridement 3) Total Shoulder Arthroplasty
11) Inflammatory Arthritis	↓ Global Motion 2 Pain	1) Medication/ Injection[4] 2) Chemical Synovectomy 3) Arthroscopic Synovectomy 4) TSA

[1]Refer to Part I for description of these tests.
[2]Injection of subacromial bursa via posterior approach.
[3]Injection of glenohumeral joint will allow medication to coat the biceps tendon intraarticularly and in the inflamed area of its sheath.
[4]Injection of glenohumeral joint via posterior approach.

subacromial bursa. This allows delivery of medication throughout the bursa, to the superior rotator cuff, the undersurface of the coracoacromial ligament, and the undersurface of the acromioclavicular joint. A small change in direction will permit penetration of the glenohumeral joint, thereby coating the biceps tendon and anterior capsular structures if this is indicated. While this can be accomplished by a variety of methods, the posterior approach has proven to be the optimal method in terms of patient comfort and adequate delivery of medication to the injured area (see Figure 1).

The role of the therapist cannot be overestimated in the management of shoulder disorders. Early referral of a patient to begin an adjunctive anti-inflammatory program allows a more rapid recovery. Modalities utilized in this program include cryotherapy, phonophoresis, iontophoresis, electrical stimulation, and a mobilization and strengthening regimen.

The effectiveness of ice application in cases of acute inflammation has been well documented. The effects of cryotherapy include vasoconstriction; decreased metabolism, which prevents secondary hypoxia; decreased histamine release, thereby reducing inflammation; and a decrease in pain. The possibility of frostbite, especially with prolonged use of cryotherapy, should always be considered. If application times are kept below 20 minutes, there should be no problem. Transient palsy of a superficial nerve may also be noted, especially in the upper extremities, and care should be taken to avoid direct application to these areas. Each period of therapy, whether at home or in the clinic, should begin with an ice application.

Phonophoresis, the use of ultrasound to push



Figure 1A



Figure 1B

Figure 1A-B. Injections into the shoulder may be accomplished by the posterior approach. The key landmark is the posterolateral corner of the acromion (A). The physician's thumb, placed on this structure, and the index or middle finger, placed on the coracoid, mark the entry point and direction of the needle (B). The needle, directed under the acromion and above the rotator cuff will place the medication in the area of impingement (B). A slight inferior angulation will allow penetration through the rotator cuff and intraarticular placement of the medication.

whole molecules of an anti-inflammatory medica- deeper tissues, is also a useful adjunct in the initial management of an inflamed shoulder. Penetration to a depth of 4 cm can be accomplished. Iontophoresis, the use of a direct electrical current to push heavy-metal ions into tissue, allows introduction of anti-inflammatoy medication to a more limited area than is possible with phonophoresis. However, the depth of penetration is not as great. It is most often used in a patient with a localized inflammation of a superficial area.

A "controlled rest" is incorporated into all anti-inflammatory programs. This measure is designed to avoid irritating an already inflamed structure while minimizing any loss of strength or range of motion. Range of motion and muscle strengthening exercises within a non painful arc are utilized to provide nourishment of the articular cartilage and allow healing of the associated musculotendinous and capsular structures. It is essential that any painful motions and/or exercises be avoided during this initial phase.

When the initial inflammation is under control, the patient is advanced to a more aggressive range of motion and strengthening program. Although it may not appear necessary, this program is prescribed to prevent recurrence of the symptoms. Passive range of motion techniques are the first line of treatment of a patient with tight musculature of the shoulder. Manual stretching exercises by the patient, passive motion by the therapist, or the utilization of a continuous passive motion machine may accomplish this goal. Passive motion helps maintain the health of the articular cartilage and synovial lining of the joint. Active forms of stretching inmethod that must be performed manually by the therapist. Additionally, translational movement of the humeral head on the glenoid by the therapist can also relieve capsular tightness and allow for increased motion. When the patient feels comfortable with the appropriate muscle flexibility and capsular stretching program he or she can be allowed to perform these exercises at home. Periodic return to the clinic may be necessary to insure that proper technique is utilized and compliance is adequate.

As motion improves, strengthening exercises and functional rehabilitation are instituted. The rotator cuff muscles are the key to proper shoulder mechanics and rehabilitation is stressed throughout the program. There are four basic movements in the program: forward flexion to 90 degrees, internal and external rotation of the shoulder with the elbow flexed to 90 degrees and to the side, and abduction from the side to approximately the 70 degree position. A specific program for the supraspinatus is also utilized. The arm is placed in 90 degrees of shoulder flexion, 45 degrees of horizontal abduction, and full internal rotation with the elbow extended. The motion, accomplished from 0 to 90 degree of flexion, functionally isolates the supraspinatus muscle. These exercises are performed repeatedly with low weight or resistive force. Abduction above 70 degrees is avoided, but full frontal flexion is allowed as strength and motion increase and inflammation decreases.

As the strength in these muscles increases, larger muscle groups and more complex patterns of motion can be added. Progression through the program is determined by strength and functional needs of the patient rather than rigid time parameters. The final stage, functional rehabilitation, includes those activities and motions specific to the patient's job or sporting activity.

As an example of the use of a combined program, a patient with Stage I or II impingement syndrome who has not improved with an initial course of aspirin would be started on a more aggressive management program. A mixture of a long-acting anesthetic and anti-inflammatory steroid is injected into the subacromial bursa via the posterior approach. If there is no contraindication (e.g., peptic ulcer disease), the patient is started on a three-week course of a nonsteroidal anti-inflammatory medication and a six day course of a 4 milligram Medrol dose pack. The patient is referred immediately to the therapist to begin the anti-inflammatory and rehabilitation program. Initially, the patient is seen daily by the therapist. Cryotherapy, ultrasound, and phonophoresis are utilized in the area of impingement. Gentle range of motion exercises and isometric strengthening exercises are started. Passive and active range of motion in the pain-free range are then initiated. The range of motion is never forced out of the pain-free area in order to avoid reinjury. Capsular mobilization is also accomplished and progressed within the limits of pain tolerance.

As the patient responds to the anti-inflammatory and mobilization program, active strengthening exercises are begun. Early efforts are concentrated on pain-free rotator cuff strengthening. Since impingement produces an irritation of the superior rotator cuff, this area also requires specific rehabilitation. Strengthening the rotator cuff also improves the biomechanics of the shoulder by aiding in the act of depressing the humeral head and decreasing the likelihood of recurrence of impingement. If the patient continues to improve, strengthening of the entire shoulder is accomplished. Activity modification, specifically decreasing heavy overhead lifting, and avoiding activities in which the elbow is abducted away from the side, is also a integral part of the program. With this combined therapy, the patient is often able to return to full activities with a pain-free shoulder. A home maintenance program is utilized to prevent recurrence of the symptoms.

It is important that the entire program be tailored to the individual patient. Anti-inflammatory medication may be continued throughout the program or discontinued if indicated. Injections into the shoulder and the use of oral anti-inflammatory corticosteroids should be limited to a maximum of three to four times per year. More frequent use of oral or injected corticosteroids may lead to local and/or systemic complications. Persistence of the discomfort to the extent that repetition of the injections is considered is an indication for orthopaedic referral.

A brief summary of the specific disorders of the shoulder with physical findings and a step wise management approach to each problem is shown in Table 2. Indications for surgery and recommended procedures will form the basis of Part III of this series. ★★★

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Radiological Seminar CCXLV: Use of the Simpson Atherectomy Catheter in a Lesion Resistant to Percutaneous Transluminal Angioplasty

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Balloon angioplasty has become a well-accepted modality for the treatment of atherosclerotic flow-limiting stenoses and selected cases of total vascular occlusion. The patency rate for iliac angioplasty is excellent (the five year patency is 90%),[1] and compares favorably with the most common surgical alternative of aorto-femoral bypass grafting. Because of decreased morbidity when compared with general anesthesia and conventional surgery, much less patient discomfort, and markedly shortened hospital stay and recovery time; balloon angioplasty in the aorto-iliac region should be considered the treatment of choice in morphologically appropriate lesions.

The patency rate of balloon angioplasty in the superficial femoral artery (SFA) and popliteal artery falls short of the results achieved in the iliac arteries. In cases of balloon angioplasty for medium and small arteries, there is a restenosis rate of about 33% in the first year.[2] The five year patency rate for balloon angioplasty in the femoral-popliteal region is 50-70%.[3] The one year patency rate for surgical treatment of SFA/popliteal disease is about 80%, and the five year patency rate 67%.[4] In light of the discrepancies between the results achieved with percutaneous transluminal angioplasty (PTA) in the iliac versus femoral-popliteal regions, much continued research has focused on improving PTA results in the smaller vessels. One device which has surfaced as a result of these research efforts is the Simpson atherectomy catheter, a device designed to shave off an atheromatous lesion in a fashion similar to a surgical endarterectomy. Presented here is our initial experience using the Simpson atherectomy catheter.

Case Report

A 59-year-old woman presented to the UMC surgical service with a several day history of right foot pain, as well as gangrenous changes in her right second toe. She had a palpable right femoral pulse, but non-palpable popliteal and foot pulses on the right. The patient had a history of insulin dependent diabetes mellitus, chronic atrial fibrillation, hypertension, and congestive heart failure. The patient had undergone a right common femoral artery thrombectomy/embolectomy three and one-half years prior to this admission. Postoperative ankle/arm indices at that time were 1+ bilaterally.

During this admission, the patient had an ankle/arm index of 0.51 on the right and 1+ on the left. A femoral arteriogram was performed which revealed a 7 cm segmental occlusion of the proximal right superficial femoral artery (see Figure 1). An

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echocardiogram was also done early in the evaluation of this patient and failed to reveal any thrombus within the heart.



Figure 1. Arteriogram of proximal thigh reveals a 7 cm segmental occlusion of the superficial femoral artery (SFA).

Intra-arterial urokinase infusion and angioplasty were offered as an alternative to operative intervention in this poor surgical candidate. Via an antegrade right common femoral artery puncture, an angiographic catheter was positioned into the proximal aspect of the SFA occlusion. After a few hours of urokinase infusion (4000u/min), antegrade flow was reestablished. A high grade, eccentric stenotic lesion of the proximal SFA was revealed angiographically at this time (see Figure 2). Several attempts at balloon angioplasty (using a 6mm diameter balloon with inflations up to 11 atmosphere of pressure) failed to improve the stenotic area (see Figure 3). A Simpson atherectomy catheter with a 9 French shaft was then placed into the SFA, and the cutting port was positioned adjacent to the plaque. Four passes of the rotating blade were made with the atherectomy catheter. A post-atherectomy angiogram revealed excellent radiographic results (see Figure 4). The debris collected in the distal chamber of the atherectomy catheter was sent to pathology and was confirmed to be atheromatous material. No arterial media was included in our specimen. The post-atherectomy ankle/arm index was 0.71 on the right (up from 0.51). The patient did require amputation of the gangrenous toe, but has otherwise done well.

Technique

The Simpson atherectomy catheter is a device which contains a metal housing with a cutting port on its side (see Figure 5). A circular blade is contained within this metal housing which is connected to a hand-held motor via a thin cable which runs



Figure 2. Antegrade flow re-established in SFA following intra-arterial urokinase infusion. A high grade focal stenotic lesion is revealed.



Figure 3. No improvement in lesion following multiple inflations of balloon angioplasty catheter.

the length of the catheter. A distal collection chamber contains the atheromatous material shaved off by the circular cutting blade when it is passed along the length of the cutting port. A low pressure, positioning balloon opposite the cutting port is used to press the cutting blade against the plaque. A short floppy segment of wire found on the distal end of the catheter helps in atraumatically positioning the catheter. The catheter is available in 7 through 11 French sizes with maximum working diameters of 4.8 through 7.7 mm.

Discussion

The major mechanism of increasing vascular lumen size with balloon angioplasty involves fracture of the diseased intima or plaque with limited dissection of the media of the diseased vessel.[2] In contrast, atherectomy not only provides the obvious advantage of mechanically extracting the atheromatous material (thus leaving a smooth, concentric vascular lumen), but also avoids medial dissection. It is hoped that both of these factors might serve to decrease the fibrocellular proliferative response of these procedures, and in turn decrease the restenosis rate.[2] Additionally, atherectomy has been shown to be useful in treatment of eccentric plaques which are often difficult or impossible to fracture by routine PTA maneuvers[2] (such as in our case report). The initial success rate of atherectomy has been reported to be 88% using the Simpson atherectomy catheter.[5] When balloon angioplasty is used to augment the atherectomy procedure, an initial success rate of 100% has been achieved.[5] The reported one year patency rate following atherectomy is 95%.[6] Because of the newness of this technology, no long-term patency rates following atherectomy have yet been reported.

Conclusion

Use of atherectomy devices such as the Simpson atherectomy catheter is becoming a part of the armamentarium of interventional radiologists. The one year patency rate is excellent. Theoretical advantages of this technique over routine angioplasty, as well as surgical revascularization, for atherosclerotic femoral-popliteal disease will likely result in more widespread usage, especially if future studies show that long-term patency is also good. ★★★

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Figure 4. Post-atherectomy angiogram demonstrates excellent results with almost no residual narrowing.

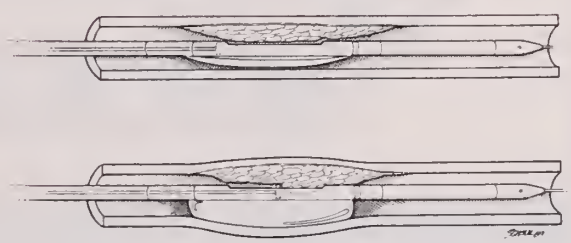


Figure 5. Top: Simpson atherectomy catheter positioned at level of atherosclerotic plaque. Bottom: Inflation of positioning balloon places sideport adjacent to plaque, and circular cutting blade shaves off plaque and deposits atherosclerotic material into distal collection chamber.

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SPECIAL ARTICLE

Physician: Answer the School Bell in Your Community

LAURO F. CAVAZOS, Ph.D.

DR. CLOWE, DR. NELSON, Dr. Ring, Dr. Sammons, Members of the House of Delegates, Ladies and Gentlemen: It is indeed an honor and a privilege for me to have the opportunity to visit with you this morning and through you, the House of American Medicine, to speak with our nation's physicians.

You may be wondering why the Secretary of Education would be interested in talking with America's doctors. Quite simply, I am compelled to take every opportunity available to me to discuss educational issues of vital importance to our nation. Issues which are well known to physicians: access, quality, freedom of choice and affordability.

You have developed the finest health care system in the world and on a daily basis, you work to assure that your patients are appropriately looked after. You provide care while caring.

In order to provide the superb care which Americans have come to expect, those involved in medical education have had to build and refine the world's foremost medical education system. Our medical schools are at the forefront of curricular innovation and continue to attract the finest students, faculty and administrations. This association has played an essential role in assuring that educational quality is maintained.

You might think that I am going to discuss medical education, and the challenges facing academic medicine. There is, however, a more urgent need that must be examined.

I am here today to ask for your assistance in improving and restructuring our nation's system of education.

Dr. Cavazos is U.S. Secretary of Education. This address was presented during the American Medical Association's House of Delegates Interim Meeting, Honolulu, Hawaii, on December 3, 1989.

"I am here to ask for your assistance in improving and restructuring our nation's system of education. In America today, there are many children who are receiving a less than adequate education."

In America today, there are many children who are receiving a less than adequate education. The early years of their lives are devoid of meaningful learning experiences. As a nation, we have not gathered our collective energies to assure that this most important period, the childhood years, is characterized as a time during which excellence in learning is a priority.

Education is, after all, the foundation that nurtures the freedoms we enjoy in all other aspects of our lives. As problems in education have mounted, as the education deficit has grown, Americans have sought to overcome the major weaknesses responsible for this deficit.

Our future as a nation rests with the children sitting in American classrooms now — children that too often are being shortchanged by our educational system. Unless we act soon, we will discover the terrible penalty we face for failing to prepare large numbers of our young people to meet the challenge of our complex, information-driven world. We may have businesses and industries supported by the most sophisticated technology, we may have hospitals filled with the most up-to-date medical advances. We may hve a first-class defense system, we may have world-famous libraries, art galleries, and research laboratories, we may have the finest democratic institutions in the world — but who will staff them, who will run them, who will guide them?

Not the children we are failing to educate. Without a well-educated citizenry, the United States is in danger of becoming what has been described as the world's only fully industrialized third-world nation.

"To cite a few . . . alarming examples, a recent international study on geographic knowledge . . . indicates that one out of seven American adults cannot locate the United States on a globe . . . An international comparison of 13-year-olds in five countries and four Canadian provinces ranked U. S. Students almost last in science and last in math. This litany of failure quantitates our educational deficit."

The Federal budget for the Department of Education is approximately $24 billion and constitutes between 6 and 7 percent of spending on education in America. But when one looks at the aggregate figures and recognizes that we will spend some $353 billion on education this school year at all levels — Federal, State and Local — I think the most important question that faces all of us is accountability: What are we getting for those dollars? For public elementary and secondary schools alone, we will spend over $195 billion in 1989-90. This country spends more on education in the aggregate and as a percentage of our gross national product than it does on defense. We spend more on education than any other country in the world, and we spend more per student than all but three countries in the world. When our commitment of resources is so high, why can't we expect our students' performance to be equally high? Quite frankly, we are not getting what we're paying for. This fundamental fact points us in the direction of finding ways to restructure what we are doing in education, to deploy those resources in a fashion that helps achieve better performance.

To cite a few of the many alarming examples, a recent international study on geographic knowledge by the National Geographic Society indicates that one out of seven American adults cannot locate the United States on a globe. And if this remains true for the next generation, then won't many of our children be literally lost in the modern world?

Let me give you some more examples of our educational deficit. Many high school juniors cannot perform even the most rudimentary intellectual tasks. For instance:

- 19 out of 20 cannot read well enough to comprehend and learn from literary essays, scientific reports, or historical documents.
- 4 out of 5 cannot write an adequate persuasive letter.
- Nearly half of our high school juniors cannot do junior high math.
- 40% of our 17 year-olds do not know what the phrase "checks and balances" means.

An international comparison of 13 year-olds in five countries and four Canadian provinces ranked U.S. students almost last in science and last in math. This litany of failure quantitates our educational deficit.

Our thriving economy is the product of an education system that brought us the leading edge in technological development and a work force able to sustain this advanced system of productivity. But every day must see progress; we must always move forward and constantly develop new talent to keep this country in the forefront of progress.

In this, the information age, education is a critical social asset. Yet, we look around us and see troubling developments. Business people complain daily about the quality of the workplace that is coming of age. Their complaints center primarily on the level of education evident in new employees. Last year, American businesses spent $25 billion on remedial education.

We hear of corporations unable to fill vacancies because prospective workers cannot pass elementary level English and math tests — and these are high school graduates!

The erosion of our way of life that threatens if we cannot halt the education deficit presents another social consequence. The United States will have a divided society with the educated and economically secure on one level and the uneducated and disadvantaged on another.

The idea behind universal education holds that the people of this country must be educated regardless of race, sex, or background thereby providing all citizens with an equal opportunity to succeed. Universal education has built a prosperous nation.

But when the education system breaks down and some of our people suffer inadequate education, the social system eventually divides the citizenry along lines drawn by the advantages or weaknesses of education.

Today, those suffering the greatest education deficits include our handicapped, the economically disadvantaged and many minorities.

Every indicator of education progress suggests

that Blacks, Hispanics and native Americans are first in dropout numbers and last in achievement scores. This cannot be if this nation is to advance. We cannot waste the potential that goes untapped every time a person drops out of school or graduates without the skills necessary to lead a productive life.

Let us also remember that America's system of education was once the envy of the world. We set the standards by which many other nations compared their own systems. Our success was based on community participation in the education of children. The school was the center of activity and a source of local pride. People recognized that the future was centered in the schoolhouse and that there was no more important job than education.

More and more, through the years, we abdicated our responsibility and let the control of education slip away from us as parents, teachers, and community leaders. Our place was necessarily filled by large educational bureaucracies that have operated, in most instances, in the best way that circumstances would allow. But these structures cannot provide the concern and caring attention that is needed to preserve the vitality and health of educational institutions.

There are four general strategies we must employ in order to solve the nation's educational deficit:

- First, let us raise *Awareness* of the nation to its educational deficit.
- Second, *Care* — meaningful change comes about through caring. I do not believe there is enough caring in America today. Think of the loss of human potential when 600,000-700,000 youngsters drop out of school each year. We must care about every child.
- Third — let us raise expectations of our nation's children that they can learn. High expectations will result in high achievement.
- Fourth — let us work together.

Thus, the reason I have come to address our nation's physicians is to ask you to assist in the effort to restructure our nation's educational system. Let me suggest some strategies.

First, early childhood education must be stressed. Encourage parents to find the time to assist in their children's education during these most important formative years. We must increase our efforts to improve the educational opportunities available in day care settings. I believe that significant early childhood education will make a difference.

Secondly, all of America's children should be given the opportunity to attend a safe, drug-free, and effective school where they can receive a high quality education.

Thirdly, our responsibilities do not end at the front door of the schoolhouse and should not be limited to paying our tax bills, when the school bell rings, our nation's children become the responsibility of our teachers. However, remember that the bell also rings at the end of the school day. It is then that we must marshal our efforts to assist with and provide support for the work of our children's teachers.

"Your voluntary participation in the education of our children would be tangible evidence of the importance of education . . . Become involved in the educational debates in your towns and cities. Participate in school board meetings and demand that schools be restructured."

You might be asking how you can help when you are over-extended in your practice, facing increasing regulatory pressures and trying to do a better job attending to the needs of your family. As a direct response to your immediate past president, Dr. Jim Davis' call to volunteerism, I would ask and encourage you and your spouses to use the talents you have been given to assist with the education of our children.

As physicians, you have a scientific background. As leaders in your community, if you could volunteer your time to encourage students with their scientific pursuits, perhaps we could erase some of our science education deficit. As science ambassadors, you could be instrumental in encouraging America's students to continue their scientific curricular pursuits.

Your voluntary participation in the education of our children would be tangible evidence of the importance of education. We need to encourage our nation's students to complete their education and look to our nation's families to assist our children to successfully attain their goal.

So too with basic health education in our school's classrooms. There is no group better suited to assist in answering the school bell and in providing a crucial link to improving the health of the American people.

We know the importance that effective education can have on controlling disease and in fostering

preventive health care measures. Such efforts will have only limited success however, if our nation is satisfied with minimal education standards. Without the basics of a well conceived educational program, the American people will have limited capability to learn.

It will be difficult for you to be successful educating your patients about their illnesses and treatment plans if they are lacking in basic educational skills. If they can't read, they can't follow your instructions. If they can't write or do basic math or science, they can't assist you in the health care work force.

Become involved in the educational debates in your towns and cities. Participate in school board meetings and demand that schools be restructured.

Remind school boards and school administrators that there are many educational initiatives they should investigate and, perhaps, utilize. For example:

- School choice or the right of parents to select the school that best fits the educational needs of their children.
- School based management — A system that empowers teachers, parents and principals to develop and make decisions about the educational programs in their schools.

Other strategies include:

- Alternative certification of teachers
- Merit pay for teachers
- Early childhood education
- Extended school year and flexible school hours
- More rigor in the curriculum

I would hope that through the example of our nation's physicians, we could encourage Americans to commit themselves to lifelong learning. In our education system's restructuring, we must incorporate the successes of our schools of higher learning into our elementary and secondary schools. By doing so, we will go a long way toward improving the lives of all Americans through improved access, true academic choice, and equal opportunity.

Again, I must emphasize, there is need for restructuring and improvement of our nation's commitment to education. Members of the House of Delegates, assist us and our nation's children. Answer the school bell when it rings in your communities. ★★★

COBRA's Anti-Dumping Provisions: Fertile Ground For Hospital and Physician Liability

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The United States Congress in 1986 enacted the Consolidated Omnibus Budget Reconciliation Act which included provisions which restrict hospitals' abilities to transfer patients and provide harsh penalties for their enforcement.[1] The restrictive section of the Act is known popularly as the "anti-dumping" legislation which was intended by Congress to address public concern about hospital transfers of emergency patients because of a patient's inability or perceived inability to pay for hospital and/or physician services (the relevant provisions will hereinafter be referred to as "COBRA" or "Act").[2] The COBRA legislation provides yet another pitfall for hospital and physician liability. Compliance and documentation of compliance are critical to reducing exposure to penalties and/or civil liability under COBRA.

All hospitals which have entered into a provider agreement under the Medicare Program must comply with COBRA's anti-dumping provisions, and those hospitals and their associated physicians who violate COBRA are subject to severe penalties.[3] Because COBRA requires hospitals and physicians, in emergency situations to assume duties they previously did not owe, claims of negligent emergency room treatment may arise more frequently now that COBRA's requirements apply.[4] Consequently, proper documentation of the provider's actions and the bases for those actions is crucial to the avoidance and defense of liability claims. Furthermore, because the requirements of COBRA will be considered the minimum standard of care under any particular set of circumstances, the Act provides virtually a road map to the establishment of liability for personal injury for the plaintiff's attorney otherwise ignorant of the provider's duties under the circumstances. Therefore, the hospital and the attending physician must at a minimum be prepared to prove COBRA compliance to avoid liability for personal injury in cases arising from alleged negligent or intentional failure to provide adequate emergency room care.

Mr. Dunbar is a member of the law firm of Holcomb, Dunbar, Connell, Chaffin & Willard, resident in its Jackson office.

Scope of the Law

COBRA requires that all Medicare participant hospitals having emergency departments must provide an appropriate medical screening examination within the capability of their emergency department to any individual who comes to the emergency department when a request is made by that individual or on the individual's behalf for examination or treatment for a medical condition to determine whether an emergency medical condition exists or if the individual is in active labor.[5] Although COBRA supplemented the Social Security Act's Medicare provisions, it applies to all patients, regardless of age or eligibility for Medicare benefits.[6]

The language of the Act does not specifically limit it to a hospital's emergency department, although the reference to a physician in the emergency department raises an inference that the rule applies only to emergency department patients. However, considering the policy of the anti-dumping provisions of the Act, any transfer of an unstable patient or one in active labor is arguably prohibited.

Appropriate Medical Screening Examination

Whenever an individual presents himself or herself for treatment in a provider hospital, an appropriate medical screening examination must occur to determine if an emergency medical condition exists or if the patient is in active labor. "Appropriate medical screening examination" is not defined in COBRA. The screening and treatment should focus on stabilizing the patient. The hospital should fol-

low normal standards of care given the particular problems presented; the hospital should not depart from its normal policies and procedures. The examination should include the use of all necessary and available ancillary and specialty services under the hospital's control, including appropriate lab facilities and personnel, surgeons and specialists, and any other diagnostic techniques such as CT scans or other imaging equipment.

If the appropriate medical screening examination discloses that the individual has an emergency medical condition or is in active labor, the provider must provide (1) for such further medical examination and such treatment as may be required to stabilize the medical condition or to provide for treatment of the labor, using the staff and facilities available at the hospital, or (2) for a transfer of the individual to another medical facility in accordance with the Act.[7]

Post-Screening Options

A. Treatment

To understand the hospital and the attending physician's duties under the Act requires a review of the meaning of its key terms. The term "emergency medical condition" means a medical condition manifesting itself by acute symptoms of sufficient severity, including severe pain, such that the absence of immediate medical attention could reasonably be expected to result in —

(1) placing the patient's health in serious jeopardy,
(2) serious impairment to bodily functions, or
(3) serious dysfunction of any bodily organ or part.[8]

The term "active labor" means labor at a time which —

(1) delivery is imminent,
(2) there is inadequate time to effect safe transfer to another hospital prior to delivery, or
(3) a transfer may pose a threat of the health and safety of the patient or the unborn child.[9]

The term "to stabilize" means with respect to any emergency medical condition, to provide such medical treatment of the condition as may be necessary to assure, within reasonable medical probability, that no material deterioration of the condition is likely to result from the transfer of the individual from a facility.[10] The term "stabilized" means, with respect to an emergency medical condition, that no material deterioration of the condition is likely, within reasonable medical probability, to result from the transfer of the individual from a facility.[11]

Patients in active labor obviously must be treated. Where an emergency medical condition is overlooked and could have been found with appropriate efforts within the hospital's capabilities, COBRA is violated. After stabilization the hospital may admit or transfer the patient.

B. Transfer

The term "transfer" means the movement, including the discharge, of a patient outside a hospital's facilities at the direction of any person employed by (or affiliated or associated, directly or indirectly, with) the hospital, but does not include such a movement of a patient who has been declared dead or leaves the facility without the permission of any such person.[12] If under the circumstances the hospital has the option to transfer, the transfer must be an "appropriate transfer."

An appropriate transfer is a transfer —

(1) in which the receiving facility
  (a) has available space and qualified personnel for the treatment of the patient, and
  (b) has agreed to accept transfer of the patient and to provide appropriate medical treatment;
(2) in which the transferring hospital provides the receiving facility with appropriate medical records (or copies thereof) of the examination and treatment effected at the transferring hospital;
(3) in which the transfer is effected through qualified personnel and transportation equipment, as required including the use of necessary and medically appropriate life support measures during the transfer; and
(4) which meets such other requirements as the Secretary may find necessary in the interest of the health and safety of patients transferred.[13]

The transferring hospital is responsible for determining that all of the prerequisites of an "appropriate transfer" are met. For example, the transferring hospital must be certain that the receiving hospital is willing and qualified to accept the patient. A transfer from one hospital to another hospital with essentially the same level of facilities would be difficult to justify under COBRA. Transfers to facilities other than specialty centers or tertiary care hospitals will be hard to justify. The duty for appropriate transfer falls specifically upon the transferring physician, but the liability for a wrongful or negligent decision to transfer will rest on the hospital as well.

To minimize exposure to penalties and civil liability from transfers covered under COBRA, documentation in the record of (1) advance acceptance of the patient by the receiving hospital, (2) its will-

ingness to treat the patient, and (3) the transferring hospital's knowledge of the adequacy of the receiving facility, is crucial. Hospitals and transferring physicians must consider the medical needs of the patient, the time frame for necessary care, the professional competence of the transferring agency, and the type of equipment needed on each transfer since the hospital is legally responsible for the adequacy of the personnel and equipment used in transport. Proper risk management requires extensive documentation of these considerations.

If a patient at a hospital has an emergency medical condition which has not been stabilized or is in active labor, the hospital may not transfer the patient unless:

(1) (a) the patient, or a legally responsible person acting on the patient's behalf, requests that the transfer be effected, or
(b) a physician or other qualified medical personnel, when a physician is not readily available in the emergency department, has signed a certification stating that, based upon the reasonable risks and benefits to the patient, and based upon information available at the time, the medical *benefits* reasonably expected from the provision of appropriate medical treatment at another medical facility *outweigh* the increased *risks* to the individual's medical condition from effecting the transfer; and
(2) the transfer is an appropriate transfer (as defined above)[14]

To qualify as a "requested transfer," the hospital should be prepared to show an *unsolicited* request for transfer accompanied by an informal consent to transfer. Documentation is important. If hospital personnel suggest or initiate discussion of a transfer, a physician's certificate for transfer should always be completed. To protect itself further, the transferring hospital might want to promulgate an internal policy which requires that another physician be consulted and concur before a patient is transferred pursuant to a physician's certificate. In any event, even if the patient's request is unsolicited and fully informed, the hospital still must ensure that the transfer meets the requirements of an appropriate transfer prescribed by the Act.

The meaning of "transfer" under COBRA will be construed broadly. Referring patients away from the facility may be considered a transfer. A violation of COBRA could occur where the hospital diverts a patient via radio instructions to an ambulance in the field or an inbound helicopter. If the hospital's associated physicians or personnel have assumed medical management over and/or treatment of a patient while in route, the ambulance or helicopter involved arguably has become part of the "hospital's facilities," and therefore, subject to the requirements of COBRA.

Hospitals will face significant risk of penalty or civil liability whenever a transfer patient's condition worsens or he is otherwise harmed during transport or shortly after arrival at the receiving facility. The judgment of the physician certifying the transfer and the medical bases for the transfer will be scrutinized in any COBRA litigation, and the negligence, if any, of the physician in certifying the transfer will be imputed to the hospital.

Refusal to Consent

A. Refusal to consent to treatment

A hospital is deemed to have met its duty to stabilize the patient or to treat active labor if the hospital offers the individual the available, proper medical examination and treatment, but the individual, or legally responsible person acting on the individual's behalf, refuses to consent to the examination or treatment.[15]

B. Refusal to consent to transfer

A hospital is deemed to have met its duty to stabilize the patient or to treat active labor if the hospital offers to transfer the individual to another medical facility in accordance with the transfer requirements of the Act, but the individual, or a legally responsible person acting on the individual's behalf, refuses to consent to the transfer.[16]

To reduce exposure to penalties and liability, the hospital should document refusals to the same degree as it does for "informed consent." The hospital must be able to demonstrate and document an *informed* refusal with all of the concomitant disclosures of relevant information.

Enforcement

Penalties for violations of COBRA are severe, and no harm need come to anyone to result in a penalty. Intentional or negligent refusal of screening examinations to patients, improper transfers, failure to send medical records, transfers without advance acceptance and other violations could result in penalties and fines.

A. Termination or suspension from Medicare program

If a hospital knowingly and willfully, or negligently, fails to meet the requirements of COBRA, such hospital is subject to (1) termination of its provider agreement in accordance with the Medicare

Program's independent penalty provisions, or (2) at the option of the Secretary of the Department of Health and Human Services, suspension of such agreement for such period of time as the Secretary determines to be appropriate, upon reasonable notice to the hospital and public.[17] A physician may be excluded from the Medicare Program for up to five years for *each* COBRA violation.[18]

B. Civil Monetary Penalties

In addition to termination or suspension of the hospital from the Medicare Program, a participating hospital that knowingly violates requirements of COBRA *and the responsible physician* in the hospital with respect to such violation are *each subject to a civil money penalty* of not more than $50,000 per COBRA violation.[19] As used in the previous sentence, the Act defines "responsible physician" as a physician who (1) is employed by, or under contract with, the participating hospital, and (2) acting as such an employee or under such a contract, has professional responsibility for the provision of examinations or treatments for the individual, or transfers of the individual, with respect to which the violation occurred.[20] The application of the penalty provisions will not be limited to physicians actually having a written employment contract with the hospital; contracts can be implied through the relationship between the hospital and the physician, and as long as the physician has a professional duty to care for the patient, the onus of COBRA remains.[21]

C. Civil Enforcement

In addition to the above penalties, enforcement of COBRA may also be achieved through civil litigation. COBRA grants patients a private cause of action against transferring hospitals for any personal harm they suffer as a proximate result of a wrongful transfer.[22] Additionally, hospitals which receive inappropriately transferred patients may bring an action against the transferring institution for financial losses incurred as a result of an inappropriate transfer.[23] Both types of actions must, however, be brought within two years of the violation.[24]

The proposed regulations suggest an additional enforcement mechanism which the statute does not provide. Hospitals which suspect that they have received a patient transferred in violation of COBRA *must report* such occurrences to the Health Care Financing Administration and to the state Medicare survey agency.[25] Hospitals which fail to report suspected violations may have their own provider agreements terminated or suspended.[26] While the proposed regulations provide no deadline for such reporting, the comments state that reporting must occur within seventy-two hours of the patient's transfer. [27]

COBRA's Effect on Other Laws

The anti-dumping provisions of COBRA do not preempt any state or local law except to the extent that the requirement directly conflicts with its requirements.[28] COBRA is the minimum standard governing access to emergency care and transport. Judges or juries may find that a higher standard of care was required under a particular set of facts pursuant to negligence theory, but neither may reduce the standard of care or limit patients or transferees' rights.

Conclusion

Essentially, COBRA's anti-dumping provisions amend a hospital's Medicare provider agreement by requiring the hospital to screen or treat all patients having certain described medical conditions and prohibits transfers unless the Act's requirements are satisfied. COBRA contains severe penalties for violations and provides numerous mechanisms for its enforcement. For the imaginative plaintiff's lawyer, COBRA supplements existing theories of personal injury liability emanating from emergency situations. Hospitals with emergency facilities and physicians associated with those facilities should recognize that COBRA's requirements and proscriptions will be broadly construed, and consequently, documentation of compliance with every aspect of the Act is crucial to the avoidance of penalties and civil liability. ★★★

P.O. Box 2990 (39207-2990)

References

1. Pub. L. 99-272, §9121(b), 100 Stat. 164 (1986).
2. 53 Fed. Reg. 22514 (June 16, 1988). The Health Care Financing Administration in the supplementary informations section of its proposed rules:

   In its Report accompanying H.R. 3128, the House Ways and Means Committee indicated that Congress was concerned about the increasing number of reports that hospital emergency rooms are refusing to accept or treat patients with emergency conditions, including medically unstable patients, if patients do not have medical insurance. In addition, the report stated that there have been reports that patients in an unstable condition have been transferred improperly, sometimes without the consent of the receiving hospital. Because Congress believed that this situation may have worsened since the Medicare prospective payment system for hospitals became effective, the Report states that the Committee "wants to provide a strong assurance that pressure for greater hospital efficiency are not to be construed as license to ignore traditional community responsibilities and loosen historic standards." (H.R. Rep. No. 99-241, 99th Cong., 1st Sess. 27 (1985)).
3. 42 U.S.C. §1395dd(a,d).

4. *See, e.g., Reid v. Indianapolis Osteopathic Medical Hospital, Inc.*, 709 F. Supp. 853 (S.D. Ind.).
5. 42 U.S.C. §1395dd(a).
6. *Id* (''whether or not eligible for benefits under this title [42 U.S.C. §§1395 et seq.] (Medicare)'').
7. 42 U.S.C. §1395dd(b).
8. 42 U.S.C. §1395dd(e)(1).
9. 42 U.S.C. §1395dd(e)(2).
10. 42 U.S.C. §1395dd(e)(4)(A).
11. 42 U.S.C. §1395dd(e)(4)(B).
12. 42 U.S.C. §1395dd(e)(5).
13. 42 U.S.C. §1395dd(c)(2).
14. 42 U.S.C. §1395dd(c)(1).
15. 42 U.S.C. §1395dd(b)(2).
16. 42 U.S.C. §1395dd(b)(3).
17. 42 U.S.C. §1395dd(d)(1).
18. 42 U.S.C. §1395dd(d)(2)(B).
19. *Id.*
20. 42 U.S.C. §1395dd(d)(2)(C).
21. This is the position taken by the Health Care Financing Administration in its proposed Rules. 53 Fed. Reg. 22519 (June 16, 1988). The Health Care Financing Administration's proposal reads:

    ''For the purposes of this provision, a physician would be considered under contract with the participating hospital, and therefore a responsible physician within the context of these regulations, if he or she has a written or oral agreement to take professional responsibility for providing examinations or treatment in the hospital's emergency room for individuals seeking emergency medical care, or for the proper transfer of these individuals whether or not the physician receives compensation from the hospital for providing the services.

    Id. The proposed regulations describe the factors to be considered by the Health Care Financing Administration and the Office of the Inspector General when determining the penalty amount for a COBRA violation. ''The degree of culpability of the hospital and the responsible physicians. The seriousness of the individual's condition in seeking emergency medical services. The prior history of the hospital and the responsible physicians in failing to provide appropriate emergency medical services or appropriate transfers. Other matters required by justice.'' 53 Fed. Reg. 22519, 22520 (June 16, 1988).''
22. 42 U.S.C. §1395dd(d)(3)(A).
23. 42 U.S.C. §1395dd(d)(3)(B).
24. 42 U.S.C. §1395dd(d)(3)(C).
25. 53 Fed. Reg. 22520 (June 16, 1988).
26. *Id.*
27. *Id.*
28. 42 U.S.C. §1395dd(f).

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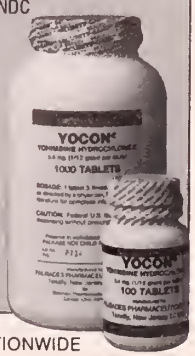
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1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
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4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Education — Personal Commitment

Suppose that every student who entered school in the state of Mississippi was nurtured and constantly provided with the data and tools and skills necessary to develop a healthy self-image from kindergarten through 12th grade.

Suppose that at the appropriate point in their educational experience (and with persistent, continual, and strong reinforcement) each student was given the necessary background and skills to be a good decision maker.

Suppose that with these two basic traits, i.e. good self image and sound judgement and decision making skills, these students were faced with all of the usual temptations related to sexuality, substance abuse, etc.

Suppose that these educational tools enabled these students to learn better, contribute more, and then face the responsibility of perpetuating our society and culture.

Suppose that due to these basic learning skills, teenage pregnancies dramatically dropped, accident rates declined (seat belts were worn), drug use and abuse become unacceptable, and good heatlh habits (diet and exercise) flourished.

Suppose that because of this increase in health awareness and behavior, other learning and academic endeavors grew and improved dramatically.

Suppose that all of this took Mississippi off the bottom in most fields.

Suppose that the stimulus for accomplishing the above process in education began with people of the learned professions (doctors, lawyers and the clergy) who became individually involved in the educational process at the local level.

The suppositions raised above are not pipe dreams but potential reality. All that is needed is responsible educational leadership (apparently a very difficult ingredient to find).

In this issue of JOURNAL MSMA there appears a presentation by Dr. Lauro F. Cavazos, Ph.D., who is the United States Secretary of Education. He speaks of the disasters in education that are quite prevalent in Mississippi and he calls upon *physicians* to help in the endeavor to overcome this tragic educational dilemma.

We, as physicians, must become involved in our local school boards. We, at MSMA, will offer you an opportunity to become involved in health education at an April 26th seminar on comprehensive school health education in Jackson. Mark your calendar now and watch for further information about the seminar.

(Continued on page 99)

EDITORIALS

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Campaign to Curb Smokeless Tobacco Use

The following editorial released by the American Academy of Otolaryngology-Head and Neck Surgery points out the increasing problem of smokeless tobacco use in this country, particularly in young people.

The Academy has undertaken a national campaign titled, "Through With Chew," in an attempt to reduce the use of smokeless tobacco. This campaign is aimed principally at the school children of America. The Academy, in conjunction with TARGET, a service organization of the National Federation of State High School Associations, is distributing a video — "Smokeless Tobacco — Is It Worth the Risk?" — to 20,200 public and private secondary schools nationwide. The video is narrated by Mel Allen, known as "The Voice of the New York Yankees," and also features Texas Rangers pitcher, Nolan Ryan; American Baseball League president Dr. Bobby Brown, and other athletes.

I solicit your help in following through with this campaign on the local level. I urge all physicians to follow-up with their local school system to assure that the video is reviewed by the secondary school students, particularly those involved in athletics. It will take the efforts of all physicians to overcome this problem.

MYRON W. LOCKEY, M.D.
EDITOR

Is There a Safe Alternative to Smoking?

Smoking cigarettes is unhealthy. Virtually every school kid in America knows it. After years of public education, kids are now aware that the decision to smoke means an increased risk of disease and death, not to mention social disapproval.

Recognizing these risks, many kids are rejecting cigarettes offered by their peers, never an easy response when you're under peer pressure. Finally, after decades of medical warnings, it appears we are heading for a truly smoke-free generation in America. But all may not be as it seems.

Like any addictive substance, tobacco has tremendous potential for enticing experimentation and overpowering reason. Rather than just saying no to tobacco, many young people who choose not to smoke are instead seeking safer alternatives. An increasing number believe they have found the perfect answer in smokeless tobacco products.

Chewing tobacco and its sniffing cousin, snuff, does offer a certain appeal to kids who don't want to smoke. It can be consumed in school without detection and does not pollute the atmosphere. It is offered in different flavors and used by athletes and actors who are young people's role models. It is fairly easy to buy, even for those under the legal age.

So why isn't smokeless tobacco a safe alternative to smoking? The obvious answer is that it still is tobacco, which contains the habit-forming chemical, nicotine. However, instead of entering the body through smoke in the lungs, chewing tobacco's nicotine is absorbed in the mouth and goes down the throat. Studies show that absorption of nicotine through the digestive tract can be more addictive than smoking.

People who use smokeless tobacco regularly for 10 years have a risk of oral cancer that is 50 times higher than for people who do not use tobacco. Even after three to four years of use, a majority of teenage snuff users in one study developed mouth sores, which can become cancerous.

The medical risks are not confined to cancer: high blood pressure, increased heart rates, and constricted blood vessels can be caused by smokeless

tobacco. Nor is it as socially attractive as it may appear. Who wants to kiss someone with the bad breath, mouth sores, tooth decay, stained teeth, and recessed gums that signal smokeless tobacco use?

Despite this strong indictment of smokeless tobacco, its popularity among young people is growing at an alarming rate. The majority of smokeless tobacco users start under the age of 21, and there has been a fourfold increase in chewing tobacco use among males 17 to 19 years old in recent years.

Ironically, the success of the anti-smoking message is creating another public health problem. The more we stress the dangers of smoking, the more attractive smokeless tobacco becomes as an alternative. The U.S. Department of Health and Human Services reported that 81 percent of users see smokeless tobacco use as *much safer* than cigarettes.[1]

Those of us who have contact with young people — parents, teachers, doctors, coaches, media and other youth leaders — must do a better job of delivering the message that chewing tobacco and snuff are more addictive and hazardous to good health than smoking. Young people themselves must discourage smokeless tobacco use; two-thirds report they got their first smokeless tobacco from other teens.[2]

Members of the American Academy of Otolaryngology — Head and Neck Surgery are the ear, nose, throat, head and neck medical specialists who often are the first to treat smokeless tobacco problems. Last year, we began a national public education campaign, called "Through with Chew." On February 25, students across the nation signed a pledge against smokeless tobacco use. Mindful of the influence of role models, we've enlisted the aid of Nolan Ryan, the baseball pitching legend, and Dr. Bobby Brown, former Yankee third baseman and now president of the American Baseball League, to lead a group of Athletes Through with Chew, and we've produced a video on the topic. Through a resolution passed this year by the Academy, 8,500 otolaryngologists have urged Congress to pass legislation restricting the advertising and sale of smokeless tobacco to young people, while encouraging stricter enforcement by state officials.

Smokeless tobacco may be our nation's most hidden health problem. You can't always tell who is using it. It is accessible and made appealing by advertising. It can take years before disease and death occur. Oral cancer is a real killer and, in the case of smokeless tobacco, it is a totally self-inflicted danger. Take it from a doctor, the only surefired guarantee for beating this killer is simply not to start.

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Doctor,

Have you ever looked for a different way to say "Thank You," "Congratulations," or "Get Well Soon"?

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For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Karen Stephens, 1105 Oakleigh Dr., Hattiesburg, MS 39401; telephone 264-0154.

Agreement Reached to Establish Uniform Medical Licensing Exam

On February 5, 1990, Susan F. Behrens, M.D., President of the Federation of State Medical Boards (FSMB), and L. Thompson Bowles, M.D., Ph.D., Chairman of the National Board of Medical Examiners (NBME), announced the endorsement of an agreement on principles to establish a single, uniform examination for medical licensure in the United States. The action was taken during an historic joint meeting in January of the executive bodies of the two organizations, the FSMB Board of Directors and the NBME Executive Board.

The principles agreement stems from *A Proposal for a Single Examination for Medical Licensure* produced in early 1989 by the multi-organizational Task Force to Study Pathways to Licensure and endorsed that same year by the FSMB, the NBME, the American Medical Association, the Association of American Medical Colleges, the Educational Commission for Foreign Medical Graduates, and other national organizations.

The new single examination, with the current working title United States Medical Licensing Examination (USMLE), will provide a common evaluation system against which to measure applicants for medical licensure.

The USMLE is intended to replace the two currently existing examination sequences used in the medical licensing process: the Federation Licensing Examination (FLEX), and the certifying examinations of the NBME (''the National Boards''). Currently, most graduates of accredited U.S. medical schools receive medical licensure on the basis of NBME certification; approximately one-fourth are licensed on the basis of the FLEX. However, all graduates of foreign medical schools seeking licensure in the U.S. are licensed on the basis of successful completion of the FLEX.

The USMLE will be a progressive, three-step examination, all three steps of which must be completed to provide an adequate assessment for initial medical licensure. Step 1 will focus on key concepts of basic biomedical science with a special emphasis on principles and mechanisms underlying disease and modes of therapy. Step 2 will focus on clinical science considered essential for practice within a supervised setting. Step 3 will focus on aspects of biomedical and clinical science considered essential for the unsupervised practice of medicine.

Ratification of the principles agreement for the USMLE by the full governing bodies of the FSMB and NBME is expected by April 1990. Details of examination system governance, administration, and operation will be further refined over the coming year. Initial projections call for phase-in of the new examination during the early 1990s, with first administration of the Step 1 examination by 1992.

Webb Scholarship Established at UMC



Mrs. L. D. Webb, left, presents UMC vice chancellor for health affairs, Dr. Norman C. Nelson, a check establishing the L. D. Webb, M.D. Memorial Scholarship Fund at the University of Mississippi Medical School. The scholarship was established through a bequest of $153,000 from the late Dr. L. D. Webb of Calhoun City. An alumnus of the Ole Miss two-year medical school who earned his M.D. at the University of Tennessee, he was in family practice in Calhoun City for more than 35 years. The first Webb scholarship will be awarded in fall 1991, to a first-year student in the School of Medicine.

UMC Announces Faculty Appointments

Five have been named in faculty appointments to the Schools of Medicine and Nursing and centerwide at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

School of Medicine appointments were Dr. John P. Gorecki, assistant professor of neurosurgery, and Dr. Robert L. Kinsman and Dr. Kerri M. Robertson, assistant professors of anesthesiology.

Dr. Donna R. Packa was named professor of nursing.

In centerwide appointments, Dr. Edwin B. Mitchell, Jr. was named instructor in pathology.

Dr. Gorecki earned the B.Sc., with honors in 1980 and the M.D. in 1983 at Queens University in Montreal, Canada. He took his internship at St. Michael's Hospital in Toronto, Canada, followed by residencies at the Hospital for Sick Children, Toronto General Hospital, Toronto Western Hospital, Wellesley Hospital, Toronto General Hospital, where he was a Botterel Fellow, Stereotactic and Functional Fellow and chief resident in neurosurgery. He was chief resident in neurosurgery at Sunnybrook Trauma Center in Toronto, and the University Hospital at London, Ontario from 1988-1989. He had been on the medical staff at St. Michaels Hospital in Toronto since July, 1989.

Dr. Kinsman earned the B.A. in 1976 at the University of California at Davis and the M.D. in 1980 at George Washington University. He took his internship and a residency at the Brooke Army Medical Center at Fort Sam Houston, Texas, followed by a residency in anesthesiology at the University of Mississippi Medical Center, which he completed in December 1989. He has held medical staff appointments at Brooke Army Medical Center and in private practice at Sacramento, Calif.

Dr. Robertson earned the B.S. in 1976 and the M.D. in 1980 at the University of British Columbia. She took her internship at St. Paul's Hospital at Vancouver, B.C. and a residency there and at the University of British Columbia. She took a fellowship in liver transplant anesthesia at the University of Pittsburgh and in clinical/research surgery at the University of Western Ontario and University Hospital at London, Ontario, where she was appointed assistant professor of anesthesia in 1988.

Dr. Packa earned the B.S.N. in 1972 at Murray State University, the M.S.N. in 1976 and the D.S.N. in 1986 at the University of Alabama at Birmingham, where she was appointed instructor in cardiovascular nursing in the graduate nursing program in 1976 and rose through the ranks to assistant professor in 1977 and associate professor in 1988, a position she held until coming to the Medical Center. She has been a member of the nursing staff at the City of Memphis Hospitals in Tennessee, and Cooper Green Hospital and the University of Alabama Hospitals in Birmingham, Ala.

Dr. Mitchell is a 1972 graduate of Millsaps College. He took predoctoral training at the University of Mississippi Medical Center, and earned the Ph.D. there in 1976. He has been on the part-time faculty at Belhaven College and Millsaps College, and an instructor in microbiology at the Medical Center. He had been laboratory manager in the department of pathology since 1986.

MSMA Auxiliary Joins In Doctors' Day Celebration

March 30 is designated as Doctors' Day, a date set aside to honor physicians. Throughout Mississippi, local components of the MSMA Auxiliary will participate in various activities to call attention to this day of tribute to men and women of medicine.

The first Doctors' Day observance ever held was by the Barrow County (Georgia) Medical Auxiliary on March 30, 1933. It became an official program of the Southern Medical Association Auxiliary in 1935, after adoption of a resolution presented at the annual meeting in St. Louis, Missouri. Since that time communities across the nation have observed the day.

March 30 was chosen as the date for the annual Doctors' Day. It commemorates the date in 1842 when Dr. Crawford W. Long, a Georgia physician, first used ether as an anesthetic agent in a surgical operation, an event considered to be one of the milestones in modern medicine.

"Throughout the years physicians have contributed their time and effort, their sympathy and compassion in the never-ending fight against disease and suffering," said Peggie Herrington, editor of *Distaff*, published by MSMA Auxiliary. "Doctors' Day is celebrated to honor their achievements and to express appreciation for their unselfish dedication," she concluded.



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ADVANCED BURN LIFE SUPPORT Teaches you how to treat and manage the unique characteristics of the burn patient. Sponsored by the American Burn Association.

ADVANCED CARDIAC LIFE SUPPORT Centers upon the treatment and life-saving intervention associated with the acute cardiac patient. Sponsored by the American Heart Association.

TROPICAL MEDICINE Provides you with advanced in-depth training in parasitology, infectious diseases occurring in tropical and other areas of the world, and other related topics.

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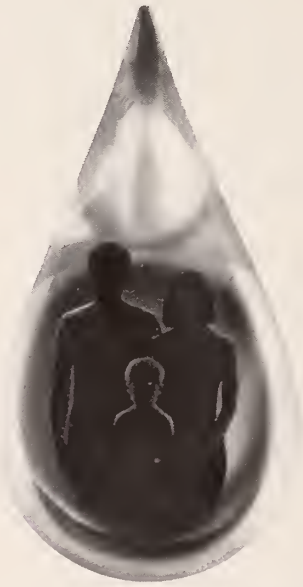
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PERSONALS

VINOD ANAND of UMC made a presentation at the Southern Region Scientific Program in White Sulphur Springs, West Virginia.

ORLANDO ANDY of UMC made a presentation at the Foundation of Thanatology in New York City. The University Medical Center paid tribute to Dr. Andy upon his retirement with a "Symposium Emphasizing Epilepsy."

ROBERT L. BUCKLEY of Columbus announces his retirement from the private practice of pediatrics.

TOM CAREY of McComb has been elected chairman of the Mississippi Chapter of the American Academy of Pediatrics.

JAMES RICHARD CAVETT of Jackson has been elected a fellow of the College of American Pathologists.

GREG CHILDREY of Columbus presented a program, "Menopause: Separating Myth from Reality" in Columbus.

REBECCA CLEMMONS of Jackson has been elected to fellowship in the American Academy of Pediatrics.

BRYAN D. COWAN of UMC lectured at the Ob-Gyn Update in McComb.

RALPH DIDLAKE of UMC made a presentation at the 12th annual Breast Cancer Symposium in San Antonio, Texas.

OWEN EVANS of UMC was guest speaker at the Ackerman Rotary Club.

DAVID FINCH announces the opening of his office for the practice of nephrology and hypertension at the Kidney Clinic, 109 Millsaps Drive, Hattiesburg.

JUDY GEARHART of UMC spoke to prospective residents at the LSU Medical School Residency Fair and Tulane Medical School recruitment dinner.

NINA GOSS-MOFFITT of UMC spoke at the Lauderdale County Mental Health Association's annual dinner in Meridian.

MARILYN GRAVES of Jackson made a presentation at the Choctaw Indian Health Hospital in Philadelphia.

J. BROOKS GRIFFIN has associated with LeFleur Ob-Gyn Associates, 1405 North State Street, Suite 302, in Jackson.

JOHN GRISWOLD of UMC made a presentation at the Eastern Association for the Surgery of Trauma 3rd annual scientific assembly in Naples, Florida, and at the American Burn Association Region IV Burn Seminar in Tampa, Florida. He also participated in the University of Utah Snowbird Symposium in Snowbird, Utah.

VALEE HARISDANGKUL of UMC presented a paper at the Second International Conference on Systemic Lupus Erythematosus in Singapore and was visiting professor in Bangkok, Thailand.

G. H. HOLLOMAN, JR. announces the opening of his office for the practice of neuropsychiatry at 5135 Galaxie Drive, Suite 202 B, in Jackson.

MICHAEL LEBLANC of UMC made a presentation at the Southern Society for Pediatric Research in New Orleans.

BRUCE M. MCCARTHY of Hattiesburg has been named to the board of directors of Trustmark National Bank in Hattiesburg.

GEORGE MOLL of UMC made a presentation at the Southern Society for Pediatric Research meeting in New Orleans.



PERSONALS/Continued

WINSOR MORRISON of UMC represented the UMC Faculty Senate at a meeting of the University Faculty Senate Association in Starkville.

JOE NORMAN of UMC made a presentation to the American College of Chest Physicians in Boston.

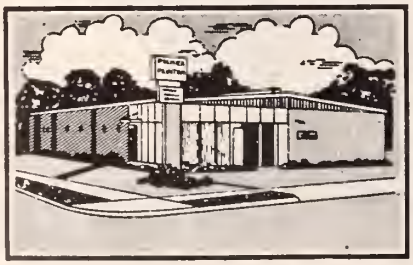
LESSA PHILLIPS of UMC spoke to prospective residents at the LSU Medical School Residency Fair and Tulane Medical School's recruitment dinner in New Orleans.

ROBERT RHODES of UMC attended the Sanus Corporation Health System's National Medical Advisory Committee meeting in New York City.

HERBERT H. ROBINSON of Pascagoula has been elected chairman of the board of directors of First Federal Savings and Loan Association of Pascagoula-Moss Point.

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THAD F. WAITES of Hattiesburg attended a National Institutes of Health conference on heart disease at Georgetown University School of Medicine in Washington, DC. He recently published an article in the *Emory Journal of Medicine*.

RALPH T. WICKER of Hattiesburg served on an editorial board of the Joint Section on Trauma for the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.

DEATHS

HULL, WALLACE A., Indianola. Born Dekalb, MS, June 22, 1912; M.D. Vanderbilt University School of Medicine, Nashville, TN, 1935; died Dec. 20, 1989, age 77.

JAQUITH, WILLIAM L., Whitfield. Born Vicksburg, MS, March 14, 1914; M.D. St. Louis University School of Medicine, St. Louis, MO, 1940; interned one year Charity Hospital, New Orleans, LA.; died Jan. 7, 1990, age 75.

MOORE, THOMAS L., JR., McComb. Born McComb, MS, Nov. 21, 1916; M.D., University of Tennessee School of Medicine, Memphis, 1941; interned one year, Gaston Hospital, Memphis, TN; died Dec. 5, 1989, age 73.

REYNOLDS, E.D., Jackson. Born Oct. 15, 1911; M.D., University of Tennessee School of Medicine, Memphis, 1937; interned Fitkin Memorial Hospital, Neptune, NJ, 1937-39; died Jan. 26, 1990, age 78.

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NEW MEMBERS

BOYD, J. JEFFERY, Brookhaven. Born Tupelo, MS, Nov. 9, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned University of Tennessee College of Medicine, Memphis, two years; urology residency, University Medical Center, Jackson, MS, 1986-89; elected by South Central Medical Society.

BROOKINS-REDDIX, NATALIE, Jackson. Born Meridian, MS, Feb. 20, 1959; M.D., Tufts University School of Medicine, Boston, MA, 1985; interned and medicine residency, Mt. Sinai Hospital, Baltimore, MD, 1985-88; elected by Central Medical Society.

BRYANT, NANCY D., d'Iberville. Born Roswell, NM, May 4, 1952; M.D., University of Texas School of Medicine, Galveston, 1977; interned and ob-gyn residency, Geisinger Medical Center, Danville, PA, 1977-81; elected by Coast Counties Medical Society.

BUSH, WILLIAM G., Jackson. Born Oklahoma City, OK, March 19, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned Pensacola Education Program, Pensacola, FL, two years; ob-gyn residency, University Medical Center, Jackson, MS, 1987-89; elected by Central Medical Society.

BUSHARDT, LISA CLARK, Hattiesburg. Born New Orleans, Aug. 9, 1955; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family practice residency, LSU Medical Center, Bogalusa, LA, 1986-89; elected by South Mississippi Medical Society.

CAMPBELL, GLENN ALLEN, Petal. Born Hattiesburg, MS, May 27, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family practice residency, the Medical Center, Columbus, GA, 1986-89; elected by South Mississippi Medical Society.

CHINTAMANENI, SURESH, Lucedale. Born India, July 14, 1957; M.D., Armed Forces Medical College, India, 1980; interned one year, St. Stephen's Hospital, IL; general surgery residency, Mt. Sinai Hospital, Boston, MA, 1986-89; elected by South Mississippi Medical Society.

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CULPEPPER, ROBERT BYRON, Gulfport. Born Long Beach, Aug. 12, 1941; M.D., University of Mississippi School of Medicine, Jackson, 1978; interned, psychiatry residency and fellowship in child psychology, University of California Affiliated Hospital, Irvin, 1978-82 and 1986-88; elected by Coast Counties Medical Society.

DOTHEROW, PIERCE D., Jackson. Born Marietta, GA, Nov. 19, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned, medicine residency, and gastroenterology fellowship, same, 1984-89; elected by Central Medical Society.

DOUGLAS, JOHN HOWARD, III, Tupelo. Born Clarksdale, MS, Aug. 11, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned one year, Greenville Hospital, Greenville, SC; anesthesiology residency, University Medical Center, Jackson, MS, 1986-89; elected by Northeast Mississippi Medical Society.

DUGGAR, PATRICIA LYNNE, Jackson. Born Jackson, MS, March 20, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned one year, Methodist Hospital, Dallas, TX; anesthesiology residency, Parkland Hospital, Dallas, 1986-89; elected by Central Medical Society.

ERVIN, JAMES W., Vicksburg. Born Shreveport, LA, April 20, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family practice residency, University of Alabama, Tuscaloosa, 1986-89; elected by West Mississippi Medical Society.

FLOWERS, SETHELL L., Ridgeland. Born Greenwood, MS, Nov. 13, 1956; M.D., University of Mississippi School of Medicine, 1984; interned one year, same; residency University of Virginia, Charlottesville, 1985-88; elected by Central Medical Society.

GLAZE, ARTHUR LAMAR, Hattiesburg. Born Jackson, MS, Sept. 13, 1955; M.D., University of Mississippi School of Medicine, Jackson, 1981; interned one year Tulane Medical Center, New Orleans, LA; ob-gyn residency, same, 1982-85; elected by South Mississippi Medical Society.

GORECKI, JOHN PAUL, Jackson. Born Montreal, Canada, Jan. 24, 1960; M.D., Queens University Faculty of Medicine, Kingston, Canada, 1983; interned and neurosurgery residency, St. Michael's Hospital, Toronto, Canada, 1983-90; elected by Central Medical Society.

HARKEY, HAYNES LOUIS, Jackson. Born Monroe, LA, Aug. 26, 1952; M.D., Louisiana State University Medical School, New Orleans, 1983; interned one year, University Medical Center, Jackson, MS; neurosurgery residency and spinal fellowship, same, 1984-90, elected by Central Medical Society.

HENDERSON, CHARLES H., Hattiesburg. Born Waynesboro, MS, Dec. 31, 1953; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned one year, Medical College of Georgia, Augusta; elected by South Mississippi Medical Society.

LINDSEY, LEANNA K., Tupelo. Born Starkville, MS, April 29, 1955; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and medicine residency, University Medical Center, Jackson, 1986-89; elected by Northeast Mississippi Medical Society.

LOPEZ-SANTINI, ROBERTO H., Picayune. Born Ponce, Puerto Rico, Sept. 25, 1961; M.D., Ponce School of Medicine, Puerto Rico, 1986; interned and medicine residency, Tulane Hospital, New Orleans, 1986-89; elected by Pearl River County Medical Society.

LOWE, ERNEST B., JR., Oxford. Born Maryville, TN, Dec. 4, 1948; M.D., University of Tennessee School of Medicine, Memphis, 1973; interned and orthopedic surgery residency, Rhode Island Hospital, 1973-77; elected by North Mississippi Medical Society.

MARNER, WESLEY D., Hollandale. Born Little Rock, AR, July 7, 1955; D.O., West Virginia School of Osteopathic Medicine, 1987; interned one year, Carson City Hospital, Carson City, MI, one year medicine residency, Metropolitan Hospital, Grand Rapids, MI; elected by Delta Medical Society.

MARTIN, VALENCIA PATRICE, Greenwood. Born Cleveland, MS, June 10, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1986; elected by Delta Medical Society.

MCGRAW, JOHN JAY, Laurel. Born Munich, Germany, Feb. 2, 1951; M.D., University of Mississippi School of Medicine, Jackson, 1978; interned one year, Spartanburg General Hospital, Spartanburg, SC; orthopedic surgery residency, University Medical Center, Jackson, MS, 1979-80 and St. Louis University Hospital, St. Louis, MO, 1982-85; elected by South Mississippi Medical Society.

NEW MEMBERS/Continued

McVey, John House, Sr., Jackson. Born Macon, MS, Sept. 7, 1955; M.D., University of Mississippi School of Medicine, Jackson, MS, 1983; interned and ophthalmology residency, University Medical Center, Jackson, 1983-88; pediatric ophthalmology fellowship, Children's Hospital, Los Angeles, 1988-89; elected by Central Medical Society.

Meadows, Roger Gavin, Laurel. Born Hattiesburg, MS, April 12, 1953; D.O., West Virginia School of Osteopathic Medicine, Lewisburg, 1986; interned and emergency medicine residency, Grandview Hospital and Medical Center, 1986-89; elected by South Mississippi Medical Society.

Moran, Olivia D., Prentiss. Born San Jacinto City, TX, Oct. 10, 1955; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family medicine residency, same, 1986-89; elected by South Mississippi Medical Society.

Parrish, Margaret L., Hattiesburg. Born Raleigh, NC, July 30, 1948; M.D., Bowman Gray School of Medicine, Winston Salem NC, 1974; interned and one year neurology residency, Henry Ford Hospital, Detroit, MI; neurology residency, Case Western Reserve University, Cleveland, OH, 1976-78; neuro-pathology residency, Columbia College of Physicians and Surgeons, Columbia, NY, 1985-86; elected by South Mississippi Medical Society.

Pepples, Holly H., Jackson. Born Oxford, MS, Sept. 10, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and family medicine residency, University Medical Center, Jackson, 1984-89; elected by Central Medical Society.

Pender, Emily S., Jackson. Born Greenville, MS, July 31, 1950; M.D., University of Mississippi School of Medicine, Jackson, 1981; interned and pediatric residency, University Medical Center, Jackson, 1981-81 and 1985-87; pediatric fellowship, Hospital for Sick Children, Toronto, Canada, 1987-88; elected by Central Medical Society.

Ray, Melinda W., Jackson. Born Tupelo, MS, Oct. 18, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and pediatric residency, University Medical Center, Jackson, 1986-89; elected by Central Medical Society.

Reddix, Carl M., Jackson. Born Meridian, MS, Aug. 3, 1958; M.D., Tufts University School of Medicine, Boston, MA, 1985; Harvard University School of Public Health, Boston, 1986; ob-gyn residency, Johns Hopkins Hospital, Baltimore, MD, 1985-89; elected by Central Medical Society.

Reynolds, David S., Hattiesburg. Born Jasper, AL, May 2, 1956; M.D., University of Alabama School of Medicine, Birmingham, 1985; interned one year, Baptist Medical Centers, Birmingham; anesthesiology residency, Vanderbilt University Hospital, Nashville, TN,1986-89; elected by South Mississippi Medical Society.

Reynolds, Denise W., Hattiesburg. Born Birmingham, AL, April 5, 1959; M.D., University of Alabama School of Medicine, Birmingham, 1985; interned one year, Baptist Medical Center, Birmingham; anesthesiology residency, Vanderbilt Medical Center, Nashville, TN, 1986-89; elected by South Mississippi Medical Society.

Robbins, Susan L., Hattiesburg. Born Columbia, MS, Jan. 31, 1961; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and pediatric residency, Arkansas Children's Hospital, Little Rock, AR, 1986-89; elected by South Mississippi Medical Society.

Rock, William A., Jr., Jackson. Born Jersey City, NJ, Oct. 9, 1942; M.D., LSU School of Medicine, New Orleans, LA, 1969; interned and pathology residency, Charity Hospital, New Orleans, 1969-73; elected by Central Medical Society.

Rose, Julian Francis, Meridian. Born Jacksonville, FL, Nov. 23, 1950; M.D., University of Mississippi School of Medicine, Jackson, 1978; interned and medicine residency, Charity Hospital, New Orleans, LA, 1978-79 and 81-83; elected by East Mississippi Medical Society.

Russell, Judy M., Wiggins. Born Wiggins, MS, Feb. 6, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and family medicine residency, Tuscaloosa Medical Center, Tuscaloosa, AL, 1985-88; elected by South Mississippi Medical Society.

Russell, Robert L., Wiggins. Born Ft. Sill, OK, Aug. 7, 1960; M.D., University of Alabama School of Medicine, Birmingham, 1986; interned and family medicine residency Tuscaloosa Medical Center, Tuscaloosa, AL, 1986-89; elected by South Mississippi Medical Society.

SHIPKEY, FREDERICK H., Jackson. Born Chadron, NE, Nov. 19, 1925; M.D., George Washington University School of Medicine, Washington, DC, 1952; interned and pathology residency, Mallory Institute, Boston City, MA, 1952-55; anatomic pathology residency, Memorial Hospital, Sloan Kettering Cancer Center, New York, 1955-57; elected by Central Medical Society.

TAPLEY, DAVID R., Senatobia. Born Kingsport, TN, Sept. 10, 1948; D.O., West Virginia School of Osteopathic Medicine, Lewisburg, 1986; interned one year, University Medical Center, Jackson, family medicine residency, University of Alabama Medical Center, Selma, 1987-89; elected by North Mississippi Medical Society.

TEMPLE, WILLIAM MEREDITH, Columbia. Born Starkville, MS, Oct. 22, 1952; M.D., University of Mississippi School of Medicine, Jackson, 1977; interned and medicine residency, Noland Hospital, Fairfield, AL, 1977-80; elected by South Mississippi Medical Society.

TILLEY, RICHARD H., Gulfport. Born Gulfport, MS, Oct. 9, 1948; M.D., University of Mississippi School of Medicine, Jackson, 1974; interned and medicine residency, Baylor Medical Center, Houston, TX, 1974-77; elected by Coast Counties Medical Society.

TOUCHSTONE, DALE A., Meridian. Born Meridian, MS, Jan. 5, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned and cardiovascular disease residency, University of Virginia Hospital, Charlottesville, 1983-89; elected by East Mississippi Medical Society.

TRAMILL, STEPHEN A., Newton. Born Oakland, CA, March 22, 1948; M.D., Southeastern College of Osteopathic Medicine, Miami, FL, 1988; interned one year, Universal Medical Center, Plantation, FL; elected by East Mississippi Medical Society.

TUCKER, B. SHANE, Tupelo. Born Tunica, MS, Nov. 21, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned one year, Methodist Hospital, Memphis, TN; otolaryngology residency, University Medical Center, Jackson, MS, 1985-89; elected by Northeast Mississippi Medical Society.

WAHL, NANCY G., Jackson. Born San Antonio, TX, May 12, 1957; M.D., University of Florida College of Medicine, Gainesville, 1983; interned and pediatric residency, Medical College of Virginia Medical Center, Richmond, 1983-87; elected by Central Medical Society.

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WALKER, LYNN C., Oxford. Born Memphis, TN, June 3, 1960; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned one year, Tulane Medical Center, New Orleans, LA; pediatric residency, University Medical Center, Jackson, MS, 1987-89; elected by North Mississippi Medical Society.

WALKER, THOMAS A., Oxford. Born Elgin, IL, Nov. 16, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned one year, Tulane Medical Center, New Orleans, LA; pediatric residency, University Medical Center, Jackson, MS, 1988-89; elected by North Mississippi Medical Society.

WARNER, WILLIAM C., JR., Southaven. Born Jackson, MS, Dec. 4, 1957; M.D., Tulane University School of Medicine, New Orleans, LA, 1983; interned and orthopedic residency, University of Tennessee Medical Center and Campbell Clinic, Memphis, 1983-88; orthopedic fellowship, Scottish Rite Hospital, Atlanta, GA, 1988-89; elected by Desoto County Medical Society.

WEAVER, ROBERT MICHAEL, Petal. Born Century, FL, June 25, 1950; M.D., LSU School of Medicine, New Orleans, LA, 1975; family medicine residency, University of Alabama College of Community Health Sciences, Birmingham, 1975-78; elected by South Mississippi Medical Society.

WHEELER, HAROLD JOHN, Greenwood. Born Clarksdale, MS, Dec. 15, 1953; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and medicine residency, University Medical Center, Jackson, 1982-85; elected by Delta Medical Society.

WHITAKER, MURRAY PINKSTON, Vicksburg. Born Shreveport, LA, July 19, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned and medicine residency, North Carolina Memorial Hospital, Chapel Hill, 1983-86; cardiology fellowship, University of North Carolina, Chapel Hill, 1986-89; elected by West Mississippi Medical Society.

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For additional information or to find out about a particular patient's eligibility, clip out and call the number above.

Gallstone Lithotripsy with the Medstone Lithotripter has been approved by the Food and Drug Administration for investigational use.

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. $12.95. 1989.

Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions. (Report of the U.S. Preventive Services Task Force). Michael Fisher, Editor. Williams & Wilkins, Baltimore. 1989.

Medico-Legal Brief

Physician Awarded Damages from Hospital

Evidence established that discharge of a physician who was the only white employee at a medical center was a result of race discrimination, a federal appellate court for Mississippi ruled.

The physician, who received financial assistance during her training from the National Health Service Corps, was required to pay over $180,000 or serve three years in a medically deprived area. When she opted for service, she was matched with the center, which served primarily black and indigent patients.

Soon after the physician began work at the center, problems arose between her and the two administrators. Because no malpractice insurance had been arranged for, she could not work for two weeks after her arrival. She was suspended without pay for infractions of center policies, including failure to follow a dress code. Soon thereafter, she was given a set of conditions for continued employment and placed on 30 days' probation. When she did not promise total compliance, she was served with 30 days' notice of termination. At a hearing, the board of directors voted to uphold these actions, and she was terminated.

The physician brought an action alleging breach of contract and racial discrimination in her employment. The jury awarded her a total of $70,000 in compensatory and punitive damages.

On appeal, most of the elements of the physician's claim were not contested. The only contention was that there was insufficient evidence to support the finding of racial discrimination.

At the trial, the physician presented evidence of disparate treatment in relation to black employees. Although her salary was to be $50,000, her contract provided a salary of $46,000. Two new black physicians received $50,000 salaries, and the black physician who replaced her was given a salary of $51,000. She was refused continuing education time and received harsher reprimands and suspensions for seemingly minor infractions of the rules. She was on call more often than the other physicians. There were also racial slurs directed toward her.

The appellate court held that the physician had presented sufficient evidence of intentional discrimination to support the jury's verdict. The court rendered judgment against the two administrators and the center for $25,000 jointly and severally and for $10,000 against each individual defendant jointly and severally with the center.

The court affirmed the trial court's finding of a breach of contract, but found there was no proof of damages due to the breach that justified an award of $25,000.—*Flanagan v. Aaron E. Henry Community Health Services Center,* 876 F.2d 1231 (C.A.5, Miss., July 13, 1989)

PRESIDENT'S PAGE

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No school board in the state of Mississippi should be without a physician or physician spouse representative, and also at least one and preferably all of the representatives of the other learned professions.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. James Clarkson, Secy., P.O. Box 128, Biloxi 39533. Counties: Hancock, Harrison, Stone.

Delta Medical Society. 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. Tom Stanford, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Melissa Dockery, Secy., 830 Medical Center Dr., West Point 39773. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. Paul Moore, Jr., Secy., 1214 Farnswort Ave., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society., 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Robert Clingan, Secy., 100 McCauley Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

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830 Gloster Street
Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Seargeant Prentiss Dr
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
I-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave
Pascagoula, MS 39567

Greenwood Leflore Hospital
1401 River Rd.
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Baptist Memorial Hospital of North Mississippi
Highway 7, South
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr
Jackson, MS 39216

Delta Medical Center
1400 E. Union
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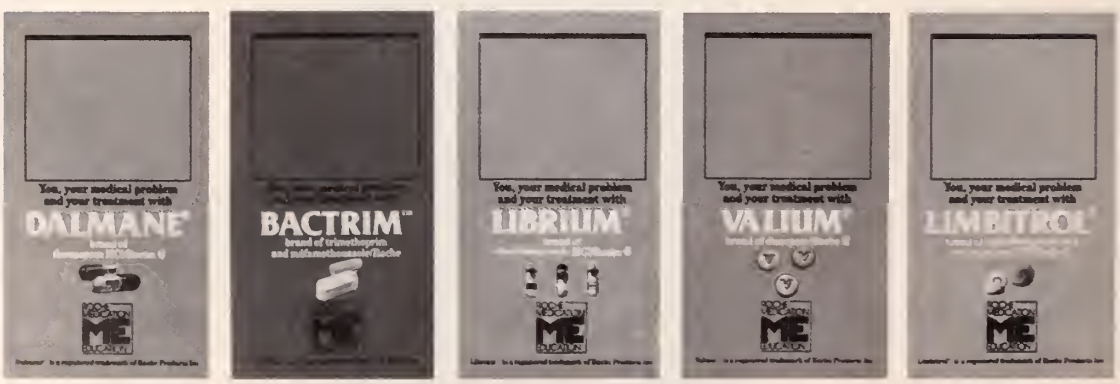
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- an educational program entitled, "Building Effective Hospital Physician Relationships: Ten Success Stories"; Stephen M. Shortell, Ph.D. will present the results of his study on the working relationships between ten selected hospitals and their medical staffs;
- presentation by the AMA-HMSS Governing Council of reports on medical staff issues including the Impact of Hospital Bankruptcy, the Role of Hospital Governing Boards in Professional Review, and Information Sharing Among Medical Staffs;
- recommendation of policy to the House of Delegates on Prioritization of Health Care Expenditures and Notification of Denials by the PRO;
- AMA-HMSS Governing Council elections for the positions of Chairman, Vice-Chairman, Secretary, and one Member-at-large.

For Information Contact:

Department of Hospital Medical Staff Services
American Medical Association
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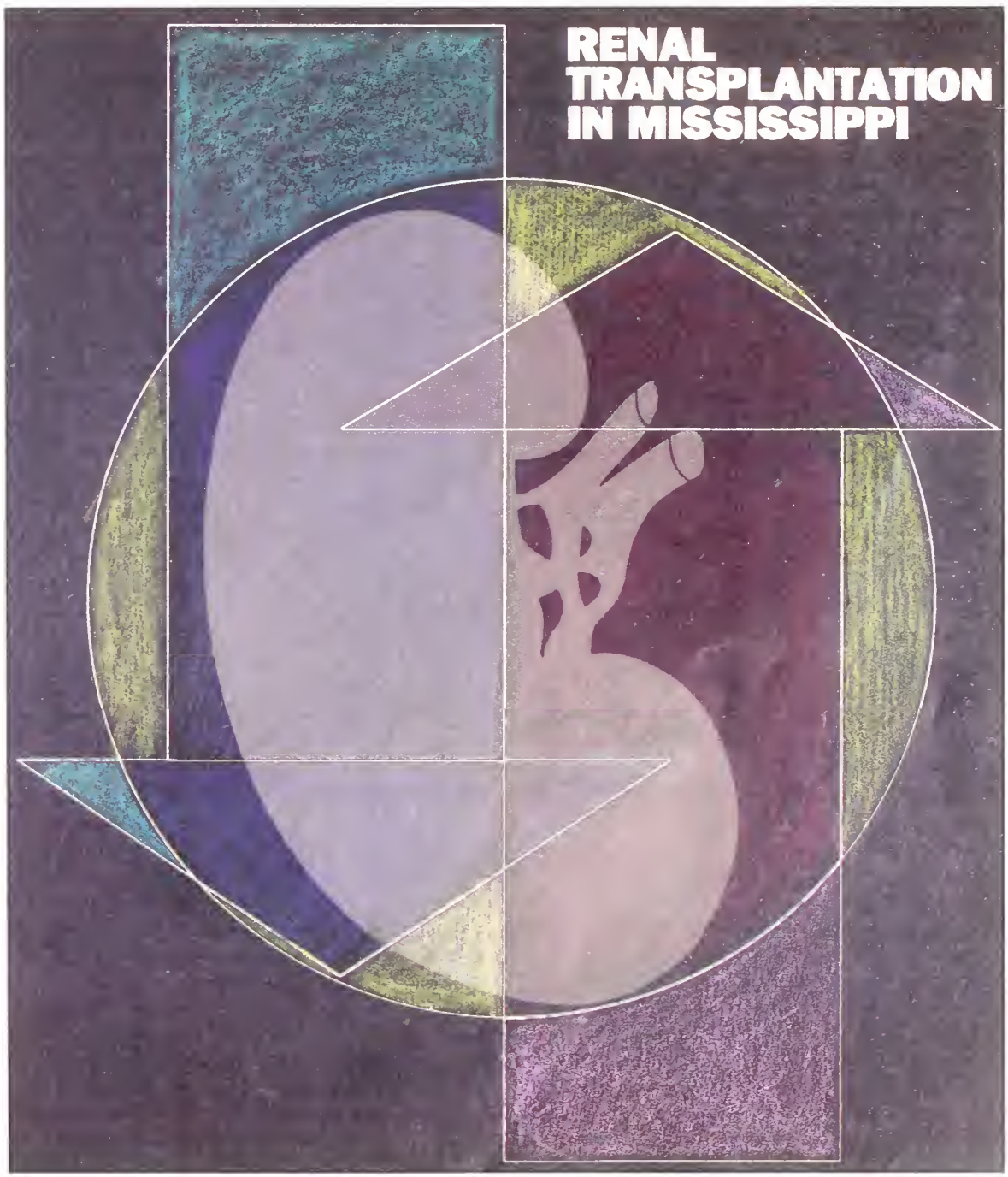
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JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

APRIL 1990



122 ANNUAL SESSION • MAY 31-JUNE 3, 1990 • COLISEUM RAMADA INN • JACKSON, MISSISSIPPI

There's one simple reason why more Mississippi physicians are choosing Medical Assurance Company of Mississippi:



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NEWSLETTER

April 1990

Dear Doctor:

Implementing the recently-legislated plan for comprehensive school health education will be the focus of a seminar hosted by MSMA on April 26 at the Coliseum Ramada Inn in Jackson. Among those expected to attend are superintendents of education, local school board presidents, school health nurses and other representatives of the MS Department of Health and the MS Department of Education, legislators involved in health and education, and some fifty physicians who have volunteered their services as school district medical directors.

> Speakers will explore current and future needs in health education, will study the dynamics of health education in young people, and examine effective models for school health education.

The AIDS virus has spawned more lawsuits than any other single disease in American legal history, according to an article in the April 11 JAMA. AIDS-related cases filed in federal, state and municipal courts highlight conflicts in civil liberties, ethics and public health which are "likely to emerge as major issues in the future," according to the author. AIDS is now an issue in divorces and child custody and visitation disputes. Blood supply is an area of liability litigation. Criminal courts are full of cases with an AIDS component. Tracking and controlling the spread of AIDS has spawned suits in a number of areas. The 28 states which require health professionals to report cases of AIDS account for only one-quarter of all domestic cases, and in some states physicians have filed suit to obtain such reporting requirements.

Has the U.S. gone overboard in the matter of cholesterol screening and control? That is the question to be debated at MSMA's Medicine Plenary Session on Friday, June 1. Speakers will be Thomas Moore, author of the controversial article in "Atlantic Monthly," and Reagan H. Bradford, MD, director of the Oklahoma Lipid Research Clinic. The Plenary Session is only one part of a four-day program of activities during MSMA's 122nd Annual Session which begins May 31 in Jackson. Plan now to attend!

Sincerely,

Patsy Twiner

Patsy S. Twiner
Managing Editor



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AIR FORCE

DATELINE

AMA's HMSS Assembly Meeting Is June 21-25

Chicago, IL - Medical staffs from across the country are encouraged to elect a medical staff representative to participate in the AMA-HMSS Assembly Meeting June 21-25 at the Chicago Marriott Hotel. The Assembly provides medical staffs with an opportunity to participate in the policymaking process of the AMA. The agenda includes presentations of "Ten Success Stories" in building effective hospital-physician relationships.

Syphilis Cases in State Increasing Dramatically

Jackson, MS - A dramatic increase in syphilis occurred in Mississippi during 1989, according to the Bureau of Preventive Health Services. The incidence was up 39.6% (with 1,577 cases in 1989 compared to 1,130 in 1988). Hinds County reported an increase of 23.1% and Washington County has an epidemic situation, with 242 cases reported in 1989 compared to an average of less than 40 in the previous two years.

Ad Campaign To Counter Nursing Shortage

New York, NY - "If Caring Were Enough, Anyone Could Be A Nurse." That's the theme of a two-year, national advertising campaign to enhance the perception of nursing as a career and to raise public awareness of nurses' contributions to communities. The program is sponsored by several nurses' organizations along with a group of physician executives and representatives of hospitals, businesses, payors and consumers.

1990 National Congress On Adolescent Health

Chicago, IL - The AMA will host the 1990 National Congress on Adolescent Health in Washington, DC on May 10-12. "Healthier Youth by the Year 2000: Countering the Exploitation of Youth" is the theme. The AMA in association with other concerned organizations will announce the KATS program ("Kids Against Tobacco") which is aimed at developing clear, consistent, anti-tobacco messages for children.

Course on Burns Set For May 30 at UMC

Jackson, MS - The Advanced Burn Life Support (ABLS) Provider Course will be offered at the University Medical Center on May 30. Speakers will address initial assessment and management, airway management, transfer and transport, wound management, shock and fluid resuscitation, along with other topics. For more information, contact Dr. Carol Scott-Conner at UMC's Department of Surgery at 984-5120.



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References

1. USP DI Update, September/October 1988, p 120.
2. Br J Clin Pharmacol 1985;20:710-713.
3. Data on file, Lilly Research Laboratories.
4. Scand J Gastroenterol 1987;22(suppl 136):61-70.
5. Am J Gastroenterol 1989;84:769-774.

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3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

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Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events was due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to three times the upper limit of normal, however, did not significantly differ from that in placebo patients. Hepatitis and jaundice have been reported. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Because cross-sensitivity among this class has been observed, H_2-receptor antagonists should not be administered to those with a history of hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

Renal Transplantation in Mississippi

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Jackson, Mississippi

RENAL TRANSPLANTATION is considered by many to be the therapy of choice for patients with end-stage renal disease (ESRD) who do not have a contraindication to either the surgery itself or the requisite immunosuppressive therapy to maintain allograft function.[1] This has been especially true since the introduction of cyclosporine as an immunosuppressive agent. This drug has improved both patient and graft survival rates while concurrently lowering infectious complications and length of hospitalization.[2] Nationally, approximately 7.5% of ESRD patients receive kidney transplants each year[3] and the number of transplants performed has risen annually to over 9,000 in 1988.[4] The current one year patient and graft survival rates are 95% and 80%, respectively, in first cadaveric graft recipients. These improved patient and graft survival rates have been reflected in historically high-risk groups as well[5] (diabetics, older individuals, blacks, second and third transplants, and individuals receiving poorly matched kidneys, or demonstrating high titers of reactive antibodies due to prior sensitization, or transplanted without the benefit of prior transfusions) thereby expanding the potential recipient pool.

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This improvement in patient and graft survival nationally has been reflected in yearly improvement in patient and graft survival in the Mississippi Transplant Program (see Fig. 1) since this subject was last reviewed in the *Journal MSMA* in October, 1983.[6] However, despite the improvement in outcome the number of patients undergoing transplantation in Mississippi has fallen from 7.5% of ESRD patients in 1981 to 1.5% in 1988, even though the number of ESRD patients maintained on dialysis during that time period have increased 300% (from 700 to 1600).[7,8]

This article reviews the recent results of cadaveric renal transplantation in the Mississippi Transplant Program and addresses some of the issues related to organ donation and transplantation which might effect local trends in delivery of renal transplantation to the ESRD community within the State.

Patients and Methods

Between January 1984 and December 1988 a total of 138 renal transplants were performed at the University of Mississippi Medical Center, 136 of whom received cadaveric kidneys and only two of which were from living related donors. Of the 136 cadaveric transplants 119 were first (primary) transplants and 17 were second or third (secondary or tertiary) transplants. One-hundred two of the primary transplant recipients and all of the second and third trans-

plants have had a minimum of one year follow-up and are included in the survival data reported below.

During this period conventional immunosuppression (CI) with prednisone and imuran was being phased out and cyclosporine (CSA) was introduced in a triple drug regimen combined with lower doses of prednisone and imuran. Except for the first seven patients who received cyclosporine from the day of transplantation, cyclosporine (6-8 mg/kg/d PO) was administered after renal function became established, as indicated by a urine volume of greater than 1500 ml/24 hrs and a spontaneous fall in serum creatinine to 3.5 ± 1.8 mg/dl. Patients whose allograft did not function immediately in the post-transplant period (delayed function) received a polyclonal antithymocyte antibody (ATG), raised locally in rabbits, until allograft function was established (as indicated by the same parameters noted above) at which time cyclosporine in the same dosages was initiated.

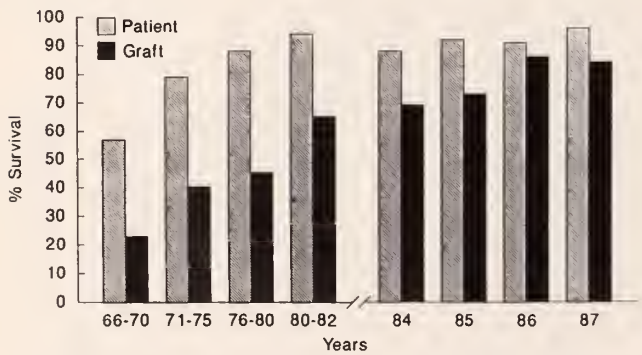


Figure 1. One year patient and graft survival rates are depicted by year of transplantation comparing data in current study 1984-87 with that reported earlier from this program by Didlake et al. [6] *Data includes recipients of first, second and third cadaveric renal transplants.*

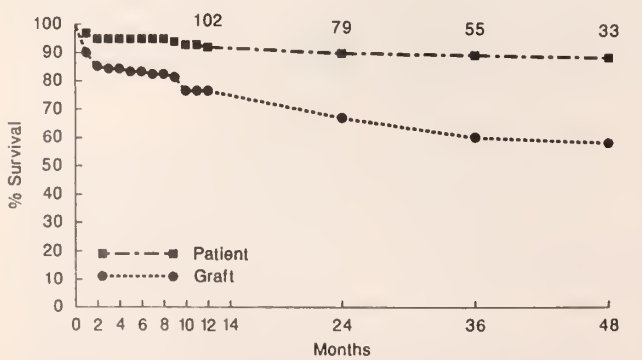


Figure 2. Overall patient and graft survival for patients receiving first cadaveric renal transplants between January 1984 and December 1987 (n = 102).

Allograft rejection was treated initially with intravenous pulse solumedrol (500 mg/d × 3 − 4 d). In those patients whose rejection episodes were resistant to steroids, ATG was added at 0.5 − 2.0 mg/kg/d × 10-14 days. Later, a monoclonal antibody preparation directed at the CD-3 receptor complex of T-lymphocytes, (Orthoclone OKT 3, Ortho-Pharmaceutical, Raritan, NJ), was used when resistance to both steroids and ATG occurred (dosage: 5mg/d × 10-14 d).

Results

Patient Characteristics

Patient demographics and etiology of ESRD are included in Table I. In the entire group there were 82 males and 56 females, 59% of whom were black and 41% were caucasian, reflecting the racial distribution of ESRD in this state (B 69%/W 31%). The mean age was 32.2 ± 1.1 yrs (range 6-59 yrs) which is significantly less than the mean age of 50.3 yrs for chronic dialysis patients in the state.[7] The mean duration of dialysis prior to transplantation was 1.9 ± 0.2 yrs (range 0-11 yrs). Chronic glomerulonephritis and hypertension accounted for the majority of ESRD in these patients (39.1% and 29.7%, respectively), comparable to what was previously reported from this center but reversed from the 19.5% and 49.8% reported nationally for the dialysis population. This probably reflects the older age of patients with ESRD secondary to hypertension compared to the average age of the transplant patients. Diabetic nephropathy, which accounts for 14% of ESRD patients on dialysis in the state, was underrepresented (6.5%) in this series, reflecting the relatively recent acceptance of diabetics for transplantation in this program. However, the actual percentage of diabetics transplanted in this series was increased by a number of maturity onset diabetics in whom diabetic glomerulosclerosis was not the etiology of the patient's renal failure.

One-hundred and nineteen of the cadaveric transplants were followed for a minimum of one year and are included in the survival data, 102 of whom received primary and 17 of whom received secondary or tertiary transplants. In the entire group one year patient survival was 91.5% and graft survival was 72.3% (see Table II), compared to a 65.4% overall graft survival reported earlier from this program (see Fig. 1). However, ten percent of the patients in the earlier report received living related transplants and would be expected to have had a better graft survival.

In those patients receiving primary cadaveric

transplants, one year patient and graft survival were 93% and 82.3% (see Fig. 2). One year survival was 82.3% for patients and 47.1% for grafts in recipients of secondary and tertiary allografts (see Fig. 3). These rates are comparable to what has been reported in the literature. When the results are broken down into those who received CI an those who received CSA, one year patient and graft survival were increased significantly from 88.2% and 66.7%, respectively with CI, to 96.2% and 86.3% with CSA (see Fig. 4). Of the 102 primary renal transplants seven (6.9%) never developed significant function, 56.9% functioned immediately and 36.2% had delayed function. There was not a significant difference in onset of function between those receiving CI vs CSA. Twenty-four percent of both CI and CSA groups never underwent a rejection episode while the remainder underwent from 1-3 rejection episodes. The number of rejections per functioning graft was lower in patients treated with CSA than in those treated with CI (1.02 vs 1.47 episodes of rejection/functioning graft). The majority of graft loss in the first year was due to rejection or to the consequences of infection related to treatment of rejection (see Table III). One patient died five weeks post-transplant of an acute myocardial infarction with good graft function and another patient with excellent graft function stopped immunosuppression and underwent a transplant nephrectomy eleven months post-transplant because of Kaposi's sarcoma. Seven patients, including the one cited above, died during the first post-transplant year, five from sepsis related to immunosuppression and one from pulmonary edema one month after returning to hemodialysis.

In patients with continued renal function at one year, serum creatinine levels are higher in those patients receiving CSA than those on CI (2.2 ± 0.14 mg/dl vs. 1.73 ± 0.15 mg/dl), comparable to

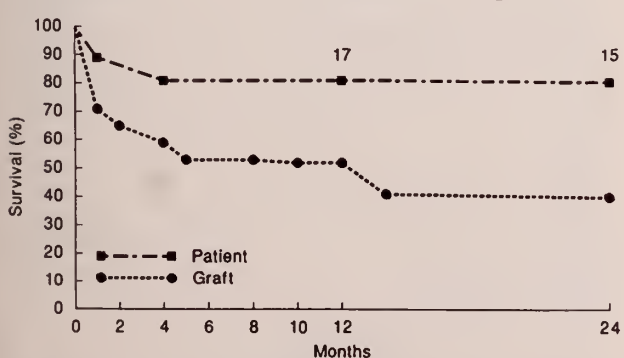


Figure 3. Overall patient and graft survival in individuals receiving second and third cadaveric renal transplants between January 1984 and December 1987 (n = 17).

TABLE I

DEMOGRAPHIC OF RENAL TRANSPLANT PATIENTS (1984-1987)

	Total	*Primary N = 102)*	
	(n=119)	*CI (51)*	*CSA (51)*
Male (%)	59.4	58.8	60.8
Black (%)	59.4	68.6	52.9
Age (yrs)	31.2 ± 11	29.4 ± 10.1	35.2 ± 11
Duration ESRD (yrs)	1.19 ± 0.2	1.7 ± 0.2	2.2 ± 0.4
Etiology of ESRD (%)	39.1	40	44.2
CGN			
HTN	29.7	38	17.2
PKD	8.0	4	11.5
Cong. or Hereditary	7.2	8	5.6
Diabetic Nephropathy	6.5	4	11.5
SLE	6.0	6	3.8
Other	3.1	-	5.8

TABLE II

ONE YEAR SURVIVAL RATES IN CADAVERIC RENAL TRANSPLANTS (1984-1987)

	(n)	*Patient (% survival)*	*Graft (% survival)*
Total group	119	91.5%	72.3%
Primary — Total	102	93.0%	76.5%
CI	51	88.2%	66.7%
CSA	51	96.3%	86.3%
Secondary & Tertiary	17	82.3%	47.1%

TABLE III

CAUSES OF GRAFT LOSS AND PATIENT DEATH IN PRIMARY CADAVERIC TRANSPLANT RECIPIENTS.

	Graft Loss	*Death*
Primary Non-Function	7	—
Rejection	16	—
Myocardial Infarction	1	1
Sepsis	1	4
Kaposi's Sarcoma	1	—
Pulmonary Embolism	—	1
Herpes Esophagitis, Candidiasis	—	1
Herpes Pneumonia	—	1
Pulmonary Edema	—	1

what has been reported in the literature. This difference is due to the nephrotoxicity associated with CSA which is generally reversible on discontinuation of CSA, and does not imply more rapid loss of allograft function. At the same time, CSA allows

for more rapid tapering and lower total prednisone dosages with concomitant reduction in steroid side effects. In our patients prednisone dosage at one year was 17.1 ± 1.4 mg/d in the CSA group vs 22.4 ± 1.2 mg/d in the CI group.

Sources of Transplanted Kidneys

In the earlier report from this center Didlake et al[6] noted that 42.6% of cadaveric transplants were harvested within the state, the remainder being "imported" from organ sharing organizations outside of the state, primarily through the Southeastern Organ Procurement Foundation (SEOPF). Between January 1981 and December 1988, 359 kidneys were harvested by the Mississippi Organ Procurement Program, 108 of which were used in the state, 18 of which were not usable and 234 of which were shipped out of state because of lack of a suitable recipient or because of a better match elsewhere. In return, 135 kidneys were received from out of state (either through SEOPF or the United Network for Organ Sharing (UNOS). One-hundred eight of these were transplanted. In the past three years the number of kidneys shipped out of state (n = 112) has significantly exceeded those received (n = 42). Thus, during this time period 60.8% of cadaveric transplants in Mississippi are performed with kidneys harvested in Mississippi, but only 28.9% of kidneys harvested within the state were actually transplanted within the state. The reasons for this discrepancy are several. Local reasons within the transplant center include a small waiting list with relatively few patients of blood groups A, B and AB and a high percentage of patients with high PRA's which make good matches difficult to obtain. Secondly, the UNOS requirement that all kidneys be offered first to those potential recipients with six antigen matches (HLA identical) strongly favors transplant programs with large waiting lists and mandates shipping many kidneys out of state. This situation will only reverse when greater numbers of prospective recipients are referred for potential inclusion on our transplant list.

Comments

Overall results of renal transplantation in the Mississippi Transplant Program have continued to show yearly improvement in patient and allograft survival since the program was initiated in 1962. The introduction of CSA in our program in 1985 has had a steady beneficial effect on allograft outcome as noted in the 1987 results (the first year in which all patients received CSA) where survival in all recipients (primary, secondary and tertiary) was 96% and 82% for patients and grafts respectively. The results with cyclosporine are even more impressive when one considers only the results in primary cadaveric transplants recipients (see Fig. 4). For those receiving CI one year patient and graft survival were 88% and 76% respectively compared to 95% and 86% in those receiving CSA. These results parallel those that have occurred in the general transplant community since the introduction of cyclosporine. They reflect not only the decreased frequency and severity of rejection episodes since introduction of CSA but also improvement in the treatment of rejection. In our program rejection is treated first with IV solumedrol for 3-4 days. If rejection is not reversed ATG is administered. For ATG-resistant rejection and for second or third rejections OKT-3 is utilized.

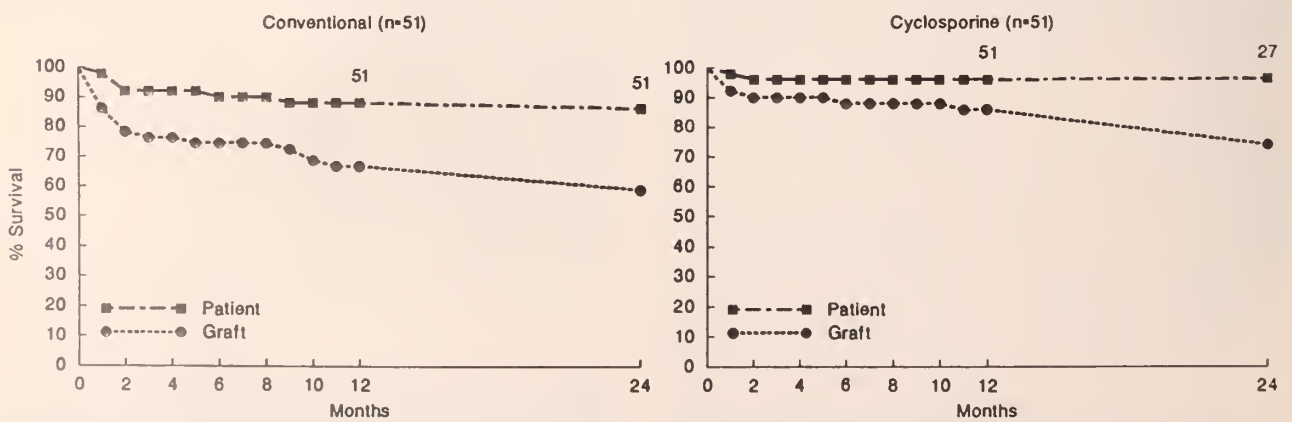


Figure 4. Comparison of overall patient and graft survival in 102 consecutive first cadaveric renal transplants broken down by immunosuppressive regimen. Fifty-one each received either conventional or cyclosporine immunosuppression (See Text). Graft survival is significantly better in those receiving cyclosporine.

Cyclosporine has not only improved overall patient and graft survival but has improved survival in patients who historically have had poorer patient and allograft survival. These include older patients, blacks, diabetics, patients who have not undergone prior transfusion, those with poorer donor to patient HLA cross-matches and those who are sensitized to various HLA antigens by virtue of either multiple transfusions, pregnancy or prior allograft rejection. CSA has allowed us to transplant increasingly older individuals and diabetics with greater success.

This improvement in allograft outcome with CSA has not occurred without a penalty. CSA has a narrow therapeutic index and requires careful monitoring of blood levels to avoid nephrotoxicity especially in the first few post-transplant months. Nephrotoxicity, one of the frequent side effects of CSA, often cannot be distinguished clinically from rejection without the benefit of renal biopsy. In addition, since CSA is metabolized in the liver by the cytochrome P-450 system, concomitant administration of any drug which either induces, suppresses or competes for this enzyme system will alter CSA metabolism resulting in either higher or lower CSA blood levels and either enhancement of toxicity or decreased immunosuppression. A partial list of agents which interfere with CSA is contained in Table IV. The other significant problem encountered with CSA is cost. At the current dosage schedule employed by us an average 70 kg individual's CSA cost is between $600-800 monthly. For those patients who have adequate insurance coverage this is no problem but a significant percentage of individuals have only partial coverage under Medicaid or Medicare and must bare a significant portion of the financial burden themselves. Also, a number of potential transplant recipients forgo transplantation because of concern about payment or copayment for this agent.

Although the results of transplantation in this program have continued to improve and are commensurate with, or better than, many larger programs, the number of patients transplanted has declined in the past several years. Only about 1.5% of ESRD patients in the state undergo transplantation annually compared to 7.5% nationally. Although this is probably multifactorial in origin entry to the program is dependant upon referral patterns and many ESRD patients are either not considered for transplantation or are referred to other programs and are not reflected in current statistics. Availability of cadaveric kidneys has not in itself been a limiting problem as more than twice as many kidneys are harvested each year in the state as are transplanted. However, because of a relatively small waiting list with a high percentage of sensitized patients many of the kidneys harvested are shipped out of state to other centers with larger recipient pools and better HLA match. Additionally, although the overall numbers of cadaveric organs harvested would be adequate to support the program needs there is also an imbalance in donor-recipient racial distribution, with 80% of organs donated coming from caucasians while 60% of the recipient pool is black. Since there are differences in distribution of HLA antigens between races and there is evidence of improved survival when donor and recipient are of the same race there is a need to improve organ donation in blacks. Thus, latter observation holds true for the entire country.

TABLE IV

CYCLOSPORINE DRUG INTERACTIONS

Drugs increasing CSA concentration

1. Ketoconazole
2. Itraconazole
3. Erythromycin
4. Cimetidine
5. Calcium channel blockers
   a. Diltiazem
   b. Verapamil
6. Steroids
7. Oral contraceptives
8. Norfloxacin

Drug decreasing CSA concentration

1. Phenytoin
2. Phenobarbital
3. Rifampin
4. Primidone
5. Glutethimide
6. Carbamazepine
7. Warfarin
8. Trimethoprim
9. Isoniazid

Drugs which potentiate CSA neprotoxicity

1. Aminoglycosides
2. Amphotericin B
3. Furosemide
4. Indomethacin
5. Cefotaxime
6. Cefuroxime
7. Melphalan

Summary

The present article reviews the results of cadaveric renal transplantation and organ donation in Mississippi during the years 1984-88. Patient and graft survival in cadaveric renal transplantation have continued to improve since the introduction of cyclosporine as an immunosuppressive agent. In the Mississippi Transplant Program recipients of primary

cadaveric renal transplants currently demonstrate 93% patient and 82.3% graft survival rates. Despite this improvement in outcome slightly more than 1% of ESRD patients in the state undergo transplantation annually compared to 7.5% nationally. ★★★

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A Scheme for the Treatment of Hyperlipidemia

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THERE IS NO LONGER any justification for ignoring elevated serum cholesterol as a primary risk factor for coronary heart disease. As long as 35 years ago, the role of serum cholesterol as a factor in atherosclerosis was being explored. Now the data are conclusive that elevated serum cholesterol confers added risk for coronary heart disease. (These data come from long-term studies such as Framingham, The Seven Countries Study, Multiple Risk Factor Intervention Trial, and the Helsinki Study). More recently, clinical studies in human subjects have demonstrated that lowering serum cholesterol reduces the risk of clinically apparent atherosclerotic heart disease and may even cause regression of human atherosclerosis.[1] In general, every 1% reduction in serum cholesterol lowers the risk of coronary heart disease by 2%.[2]

Initially, the normal range for cholesterol was determined by using healthy populations as standards and diagnosing the upper 5% of the statistical distribution as abnormal. However, this "upper limit of normal," between 285 and 320 mg per deciliter in most laboratories, is in sharp contrast to epidemiological evidence which shows increased risk of premature coronary heart disease (CHD) at cholesterol levels over 200 mg per deciliter. Table 1 shows the large number of people whose cholesterol needs attention.[3] Therefore, reeducation of both the lay public and of physicians will be necessary to address the large number of people who fall within this range and who should benefit from lowering their serum cholesterol.

We will outline the general procedure for lipid evaluation as recommended by the National Cholesterol Education Program (NCEP)[4] and the American Heart Association (AHA),[5] nearly identical recommendations. In general, an initial cholesterol level should be measured by the age of 18 to 20. There are two classes of individuals who should be evaluated at a younger age: (1) people who have parents with elevated serum cholesterol levels and (2) children with a family history of premature CHD, ie, myocardial infarction in a family member younger than 55 years of age.

As a first approximation of risk of CHD, a total serum cholesterol is a good screen. If the total serum cholesterol is less than 200 mg/dL, then the measurement should be repeated in three to five years and the patient given general dietary information on maintaining a healthy serum cholesterol level. When a serum cholesterol level over 200 mg/dL is found, this value should be confirmed by a second serum cholesterol within one to eight weeks. For purposes of validity, this second value should be within 30 mg/dL of the original determination. With a confirmed elevated serum cholesterol, the recommended procedure depends on the presence or absence of CHD or its risk factors. Table 2 lists the major risk factors for CHD, and it is important to note that being male constitutes one major risk factor. In a patient with cholesterol between 200 and 240 and a negative history of CHD and less than two other risk factors, the AHA and NCEP advocate initiation of a Step 1 AHA diet and rechecking cholesterol in one year. (However, one may wish to recheck the cholesterol in three to six months in order to emphasize the importance of obtaining a lower serum cholesterol level and the benefits of a prudent diet.)

Individuals whose cholesterol is between 200 and 240 mg/dL with known CHD or risk factors for CHD as well as those with cholesterol levels over 240 mg/dL should have a lipid profile drawn. Treatment is then based on the calculated low density

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lipoprotein cholesterol (LDL-C) level. In general, total cholesterol levels less than 200 mg/dL correspond to an LDL-C level of less than 130 mg/dL and a 240 mg total cholesterol translates to an LDL-C of approximately 160 mg/dL. Therefore, individuals with an LDL-C less than 130 mg/dL are at the desired level and only need general dietary outlines and a recheck in three to five years. An LDL-C between 130 and 160 mg/dL without CHD or risk factors should prompt initiation of a Step 1 AHA diet and a recheck of the lipid profile in one year (or perhaps sooner) This same LDL-C level in the presence of CHD or two other risk factors for CHD should prompt the physician to instruct the patient in a cholesterol lowering diet and to monitor him closely. These patients are considered at high risk for a coronary event.

In the initial evaluation of a patient, attention should be focused on all modifiable risk factors for CHD as well as secondary causes for hyperlipidemia, such as diabetes mellitus, Cushing's Disease, hypothyroidism, alcoholism, nephrotic syndrome, and certain medications (glucocorticoids, exogenus estrogens, anabolic steroids, etc). Sedentary individuals must be encouraged to exercise on a regular basis.

Dietary therapy is the first line therapy for hyperlipidemias. In many cases, dietary practices have been the primary cause of the problem whereas in others dietary practices have exacerbated an underlying genetic abnormality. Regardless of the role of genetic factors, dietary intervention will result in improvement.[6] Therefore, identification of one of the familial forms of hyperlipidemia does not change

TABLE 1

PLASMA LIPID LEVELS AGE AND SEX DISTRIBUTIONS WHITES

AGE	MEN Mean	MEN PERCENTILE 5	MEN PERCENTILE 50	MEN PERCENTILE 95	WOMEN Mean	WOMEN PERCENTILE 5	WOMEN PERCENTILE 50	WOMEN PERCENTILE 95
Total Cholesterol (mg/dl)								
15-19	150	113	146	197	158	120	155	203
20-24	167	124	165	218	172	125	170	228
25-29	182	133	178	244	176	130	173	229
30-34	192	138	190	254	179	131	176	238
35-39	201	146	197	270	186	141	183	245
40-44	207	151	203	268	195	147	192	253
45-49	212	158	210	276	205	152	201	268
50-54	213	158	210	277	218	163	215	285
55-59	214	156	212	276	226	169	223	294
60-64	213	159	210	276	229	173	226	296
LDL Cholesterol (mg/dl)								
15-19	94	62	93	130	96	59	93	137
20-24	103	66	101	147	104	57	102	159
25-29	117	70	116	165	110	71	108	164
30-34	126	78	124	185	111	70	109	156
35-39	133	81	131	189	120	75	116	172
40-44	136	87	135	186	125	74	122	174
45-49	144	98	141	202	129	79	127	186
50-54	142	89	143	197	138	88	134	201
55-59	146	88	145	203	146	89	145	210
60-64	146	83	143	210	152	10	149	224
HDL Cholesterol (mg/dl)								
15-19	46	30	46	63	52	35	51	74
20-24	45	30	45	63	53	33	51	79
25-29	45	31	44	63	56	37	55	83
30-34	46	28	45	63	56	36	55	77
35-39	43	29	43	62	55	34	53	82
40-44	44	27	43	67	58	34	56	88
45-49	45	30	45	69	59	34	58	87
50-54	44	28	44	63	62	37	62	92
55-59	48	28	46	71	62	37	60	91
60-64	52	30	49	74	64	38	61	92

From LRC Prevalence Study NIH 80-1527. Used by permission.

the primary therapy from dietary modification. Dietary management has been simplified by the concept that a single basic diet may be used to treat all types of hyperlipidemias. The basic design is to reduce the intake of saturated fatty acids and cholesterol and to eliminate excess total calories. These modifications can be accomplished in two phases through the AHA Step 1 and Step 2 diets (see Table 3). Our goal must be to educate patients about the importance of diet and to help them gradually incorporate new eating patterns as permanent features of their lifestyles. By gradually changing his diet, the patient adjusts to what foods are or are not acceptable and the prescribed diet loses its technical overtones and the patient can eat more naturally.

By diet alone, we can lower total cholesterol in some people by as much as 50-55 mg/dL and LDL-C by 15-30 mg/dL while maintaining a palatable diet.[6] The Step 1 diet should be recommended by the physician and either he or his staff (or if they feel inadequate, a dietitian) instruct the patient in the specifics of the diet. The Step 1 diet calls for total fat intake of less than 30% total calories, saturated fatty acid intake less than 10% of calories, and cholesterol less than 300 mg per day. In patients with CHD or two other risk factors for CHD, the goal is to achieve reduction of total cholesterol to under 200 mg/dL and an LDL-C of less than 130 mg/dL. For those patients without CHD or other risk factors for CHD, the goal is to achieve a total cholesterol under 240 mg/dL or an LDL-C under 160 mg/dL. Serum cholesterol should be measured 4-6 weeks and again three months after initiation of the diet. If the patient has not reached his goal after three months, he should be advanced to the Step 2 diet. Step 2 further reduces saturated fatty acids to less than 7% of the total calories, and cholesterol to less than 200 mg per day. Adherence to a Step 2 diet generally requires the input of a registered dietitian. The Step 1 and Step 2 AHA diets are based on the rationale that reduction of total fat intake reduces saturated fat intake and promotes weight reduction by substituting food of lower caloric density. It is well known that animal fats and especially butter fat as in butter, whole milk, ice cream, and cheese are rich in saturated fatty acids, but there are also three plant oils high in saturated fatty acids — palm and palm kernel oil, coconut oil, and cocoa butter. Basically, serum cholesterol is raised 2.7 mg/dL for each percent of caloric intake contributed by saturated fatty acids. Metabolic studies have shown than dietary cholesterol also raises serum cholesterol though the degree of rise is quite variable from person to person. In general, dietary cholesterol raises serum cholesterol 8-10 mg/dL per 100 mg of cholesterol per 1,000 calories of dietary intake.

TABLE 2

CORONARY HEART DISEASE RISK FACTORS OTHER THAN LDL-CHOLESTEROL

Risk factors for coronary heart disease:

- Male sex
- Family history of premature CHD (definite myocardial infarction or sudden death before 55 years of age in a parent or sibling)
- Cigarette smoking (currently smokes more than ten cigarettes per day)
- Hypertension
- Low HDL-cholesterol concentration (below 35 mg/dL confirmed by repeated measurement)
- Diabetes mellitus
- History of definite cerebrovascular or occlusive peripheral vascular disease
- Severe obesity (≥ 30% overweight)

If after six months of dietary therapy a patient has not achieved an acceptable cholesterol level, he should then be considered for the *addition* of pharmacological intervention. The addition of drugs does not mean the substitution of drugs for diet. After maximal efforts at dietary modification, individualized clinical judgment is required for the initiation of a lipid-lowering drug treatment program. The AHA recommends the initiation of drug treatment when the LDL-C remains above 160 mg/dL in the presence of CHD or two risk factors of an LDL-C above 190 mg/dL in the absence of CHD and its risk factors (see Table 3).

There are five general classes of lipid-lowering agents. The first class, the bile acid sequestrants, interrupt enterohepatic circulation of bile acids, hence forcing the liver to divert LDL-C from the blood stream for bile acid production. The increased synthesis of bile acid from cholesterol depletes hepatic stores of cholesterol and stimulates LDL-C receptor activity thereby removing LDL-C from the circulation and reducing serum LDL-C levels.[7] The major effect of the bile acid sequestrants is lowering LDL-C levels though there is some minor impact in increasing high density lipo-protein cholesterol (HDL-C) levels.[8] The side effects of the bile acid sequestrants are primarily gastrointestinal and not serious though discomforting — they include epigastric fullness, bloating, constipation, nausea, and flatulence. Systemic side effects are uncommon since the resins are not absorbed, but in patients with cholestasis or bowel disease, the bile acid-binding resins can cause steatorrhea and malabsorption of

TABLE 3

DIETARY THERAPY for HYPERLIPIDEMIA

Nutrient	*American Diet*	*Recommended Intake*	
		Step-One Diet	*Step-Two Diet*
Total fat	40% of total calories	Less than 30% of total calories	Less than 30% of total calories
Saturated fatty acids	15% of total calories	Less than 10% of total calories	Less than 7% of total calories
Polyunsaturated fatty acids	6% of total calories	Up to 10% of total calories	Up to 10% of total calories
Monounsaturated fatty acids	16% of total calories	10% to 15% of total calories	10% to 15% of total calories
Carbohydrates	45% of total calories	50% to 60% of total calories	50% to 60% of total calories
Protein	15% of total calories	10% to 20% of total calories	10% to 20% of total calories
Cholesterol	500 mg/d	Less than 300 mg/d	Less than 200 mg/d
Total Calories	Varible	To achieve and maintain desirable weight	To achieve and maintain desirable weight

fat soluble vitamins (Vitamins K, A, D, E, and folic acid) and some medications (including digitalis, hydrochlorothiazide, thyroxine, and phenobarbital).[7] The two agents in this class, cholestyramine and colestipol, are powders and require mixing with water or fruit juice to be taken 2-3 times per day. Without intensive patient education, the combination of GI symptoms and dosing hassles can lead to poor adherence. The Lipid Research Clinics Coronary Primary Prevention Trial (LRC-CPPT) shows that cholestyramine plus dietary modification could reduce elevated serum cholesterol levels and reduce the rate of CHD deaths and non-fatal myocardial infarctions — the data showed for every 1% decline in serum cholesterol there was a 2% decline in coronary risk.[2] Furthermore, the Cholesterol-Lowering Atherosclerosis Study (CLAS) reported that colestipol plus nicotinic acid not only reduced serum cholesterol but also could slow or reverse the growth of coronary atherosclerotic lesions.[1]

Nicotinic acid or niacin is a very effective lipid-altering agent reducing total cholesterol, LDL-C, and triglycerides while raising HDL-C levels through the inhibition of the mobilization of fatty acids from adipose tissue, through decreased hepatic production of very low density lipoprotein cholesterol (VLDL-C) and LDL-C, and through decreased catabolism of HDL-C.[7] The most frequent side effect from nicotinic acid is flushing. Though not serious, it is bothersome to many patients. The flushing is most prominent on initiation of the drug and tolerance to the flushing develops with time and can be mitigated with a prostaglandin inhibitor such as aspirin. By thorough patient education and gradual increments in the dose of niacin, it can be both extremely effective and well tolerated. The usual goal is 3 grams per day given in 3-4 doses though occasionally doses as high as 6 grams per day are used. In the Coronary Drug Project, a decline in recurrent nonfatal myocardial infarction was apparent as well as, ultimately, a decline in overall mortality.[9] In addition to the flushing, other side effects for niacin include gastrointestinal symptoms with activation of peptic ulcer disease, aggravation of irritable bowel syndrome, diarrhea, nausea, and abdominal pain. At high doses, hyperuricemia and gout and liver enzyme abnormalities and skin lesions may be a concern as well as occasional hyperglycemia. Contraindications to the use of nicotinic acid include peptic ulcer disease, hepatic disease, diabetes, gouty arthritis, and significant hyperuricemia.

The newest agents for lowering cholesterol are the HMG-CoA reductase inhibitors — lovastatin is currently on the market and compactin is expected to be marketed soon. By inhibiting the rate-limiting step in cholesterol synthesis (conversion of 3-hydroxy-3-methylglutaryl CoA to mevalonate), lovastatin decreases cholesterol synthesis and increases the production of hepatic LDL receptors. Increased catabolism of LDL-C results in reductions of total and LDL cholesterol between 20 and 50%.[10] Although generally well tolerated and seemingly free of serious side effects, additional investigation will be required to determine if any toxicity is incurred with long-term use of the HMG-CoA reductase inhibitors and whether or not they improve mortality. Lovastatin can cause GI distress and elevated liver enzymes, often delayed for months after the initiation of the medication. The other toxicity associated with lovastatin is the development of lens opacities which requires ophthalmological follow-up. Usually, lovastatin is begun at a 20 mg dosage and increased to 80 mg divided into two doses.

The next class of drugs, the fibric acid derivatives include gemfibrozil and clofibrate. Because of the

toxicity associated with clofibrate, its use is not recommended.[11] Gemfibrozil lowers triglyceride by enhancing the activity of lipoprotein lipase and appears to decrease the synthesis of VLDL-C by decreasing synthesis of the VLDL carrier apolipoprotein B while increasing the synthesis of HDLC. When primary hypertriglyceridemia is present with or without elevated LDL-C, gemfibrozil may increase LDL-C.[12] Evidence from the Helsinki Heart Study has shown gemfibrozil to be a safe and effective drug, reducing the incidence of coronary heart disease by 34% in the treatment group with evidence of substantial improvement in the lipid profile — lowering total cholesterol and LDL-C by 10% each and raising HDL-C by 11%.[13] Gemfibrozil is well accepted by patients at a bid dosage and with few side effects — these are primarily GI with some rash and occasional alterations in liver enzyme values. Contraindications to therapy with gemfibrozil include severe hepatic or renal disease and preexisting gallbladder disease.

Probucol produces a moderate reduction in LDL-C, but also a decrease in HDL-C. Probucol is not a drug of first choice in most patients though occasionally it is recommended as a combination with a first-choice drug. It modifies LDL-C particles and stimulates their clearance by nonreceptor mechanisms so that probucol can be effective in patients who lack LDL receptors as in the homozygous familial form of hypercholesterolemia. Probucol has not been shown to prevent CHD in humans, but in animal studies there has been evidence that probucol inhibits the oxidation of LDL-C and may prevent its deposition in the arterial wall. [14] The side effects of probucol include diarrhea, dyspepsia, and a prolongation of the QT interval. Therefore, patients with electrocardiographic findings suggestive of ventricular irritability should not be treated with probucol.

Some patients with more severe elevations of LDL-C who have not achieved adequate lowering of the LDL-C levels may require combination therapy with two or three lipid-lowering agents. Combining a bile acid sequestrant with nicotinic acid provides a synergistic combination by pairing an agent that enhances the clearance of LDL-C with an agent that limits its synthesis. There has been evidence to show not only slowed progression of atherosclerosis but also regression of angiographically assessed atherosclerosis in the CLAS data.[1] The combination of a bile acid sequestrant with a HMG-CoA reductase inhibitor is also effective by pairing two agents that stimulate LDL-C receptor activity by two different means and also the reductase inhibitors inhibit the compensatory increase in hepatic cholesterol synthesis that usually follows bile acid sequestrant treatment used alone.[15] Gemfibrozil used with a bile acid sequestrant is effective and allows the treatment of patients with hypertriglyceridemia with gemfibrozil. The combination of gemfibrozil and lovastatin should be avoided as there seems to be an increased risk of myositis with this combination. Although most patients who are able to follow a diet will not need multi-drug therapy, which is expensive and undesirable, patients with severe familial hypercholesterolemia may require a three-drug combination including a bile acid sequestrant.

With the current range of lipid-lowering drugs, it is important to consider each patient individually as well as each medication. A drug must be evaluated in terms of its effectiveness in altering the lipid profile and the impact of the CHD risk as proven through clinical trials. Because lipid-lowering therapy is likely to be a lifelong therapy, it is important to evaluate long- and short-term safety profiles, separating the side effects that are more nuisances than real dangers from those that cause serious problems. The last consideration in drug therapy is cost and convenience — both of these can affect adherence to therapy. Thorough patient education and consistent follow-up communication can contribute greatly to the acceptance and effectiveness of drug therapy.

Drugs are not the magical solution for hyperlipidemia that both physicians and patients would like for them to be — they are substantially less effective without dietary intervention. With intensive dietary instructions at least one third of patients do not require drug therapy.[16] We now have clear-cut clinical evidence that elevated serum cholesterol leads to an elevated incidence of CHD and decreased life expectancy. Furthermore, clinical trials have shown that lowering serum cholesterol reduces the risk for CHD and can improve longevity. In the near future we can look forward to a clearly defined role for HDL-C and its modification as well as more data on the long-term effects of lipid altering medication. Therapy for hyperlipidemias will probably undergo evolutions similar to the pattern of therapy for hypertension — (1) initial acknowledgement of the aberration as a risk factor, (2) additional hard data to demonstrate the effects on morbidity and mortality, (3) gradual education, and (4) eventually, conviction to treat with life-style changes and then medication.

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Electrophysiologic Recording as an Aid in the Clinical Evaluation of "Muscle Jerks"

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MUSCLE JERKS ARE sudden and brief muscle contractions. The contraction may involve the whole or a part of a muscle, and may appear singly in isolation or repetitively in a regular or irregular manner. At times, the muscle contraction may not be strong enough to move a joint; in this case, it is more properly described as a muscle twitch. On other occasions, the contraction may be so intense and violent that it may throw a person off balance.

The physician is sometimes asked to evaluate a patient with muscle jerking, and there are many conditions that can produce this abnormal movement. In a general setting, however, the question most often asked of the clinician is whether these jerks are related to seizures. Based on clinical examination alone, attempts at identifying the muscle jerks can sometimes be met with difficulties, and the clinician has to rely upon ancillary measures to assist him in the evaluation of the problem. When properly utilized, electrophysiologic recording can be an invaluable aid in the differentiation and characterization of muscle jerks.

In this paper, we describe simple electrophysiologic recording techniques which are helpful in the evaluation of some of the common conditions that produce abnormal motor activity such as seizure disorder, myoclonus, and asterixis. The equipment utilized in the studies is available in most hospital settings.

Electrophysiologic Recording

The most important requirement during electrophysiologic study of a patient with muscle jerking is simultaneous monitoring and recording of electroencephalographic (EEG) and electromyograhic (EMG) activities. This can be done on any EEG machine with an adequate number of recording channels. In addition to the routine scalp EEG leads to record the cortical electrical activity, additional electrodes are also attached to different muscle groups that present with muscle jerks. This recording procedure determines if any time-locked relationship exists between the EMG activity related to the muscle jerk and the EEG abnormality in the cerebral cortex. Any commercially available surface disc EEG electrodes can be used in the recording. These electrodes are attached securely to the recording sites (scalp and muscles) with EEG electrode paste or preferably with collodion. Skin impedances may be reduced to an acceptable level through gentle use of a dermabrasive solution. If available, an accelerometer (a device that detects both intensity and direction of movement) is useful in recording the movement associated with the jerk.

Simultaneous EEG and EMG recording should be performed: (a) while the patient is completely at rest to determine the presence of any abnormal spontaneous movement, (b) during voluntary muscle contraction to detect any action-induced myoclonic jerk or loss of postural muscle tone, and (c) during presentation of various types of stimuli such as bright light, loud noise, or tapping over a tendon to determine if there is any reflex-induced muscle activity.

Equipment which can record evoked potentials is also useful in the evaluation of muscle jerks. In certain disorders such as cortical reflex myoclonus,[1] the muscle jerks can be reflexly induced by a stimulus such as electrical stimulation of a nerve. The cortical somatosensory evoked potential (SEP) produced by the electrical stimulus is abnormally enlarged (giant), indicating a hyperexcitable cerebral cortex. After the abnormal cortical discharges, abnormal EMG activities are notable in various muscle

From the Department of Neurology, University Medical Center, Jackson MS.

groups that were reflexly activated by the stimulus.

The following four patient case reports illustrate the usefulness of the above-mentioned simple recording procedures in elucidating the nature of the muscle jerks.

Patient 1

This 25-year-old man was involved in a motor vehicle accident and sustained multiple injuries. He had systemic hypotension and developed cardiopulmonary arrest. He was successfully resuscitated and remained in coma for many days. While still comatose and in the intensive care unit, he was noted to have spontaneous and irregular jerking of the lower extremities, which was worse on the right side. Portable EEG recording was performed with simultaneous EMG recording on the right leg to monitor the muscle jerking. Figure 1 is a sample of the recording. The EEG recording showed frequent epileptiform spiking over the central midline area. Following each spike was the appearance of the EMG burst from the leg muscles related to the jerk. The patient was diagnosed as having focal motor seizures with frequent involvement of the right leg. He was treated with anticonvulsants. Initially, the focal seizures were difficult to control.

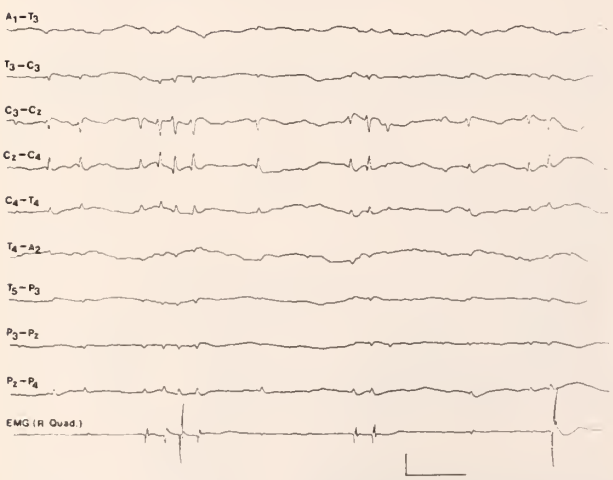


Figure 1. EEG recording on a comatose patient with anoxic encephalopathy. The patient had irregular jerking of the lower extremities. An EMG lead was attached to the right quadriceps muscles (R Quad.) to monitor the leg jerking. Epileptiform spikes are present in the EEG recording and are maximal over the midline scalp region (Cz), which is overlying the leg area of the cerebral cortex (third and fourth channels from the top). Short bursts of EMG activity are present in the leg corresponding to the jerks (bottom channel). Note the nearly one-to-one relationship between the EEG spikes and the EMG bursts. This patient had focal motor seizures involving the legs. Vertical calibration is 70 uV. Horizontal scale is 1000 msec. In this and the succeeding figures, an upward deflection in the recording indicates relative negativity in input one of the amplifier.

The patient gradually regained consciousness. Several weeks later, he began to show purposeful movements. However, it was noted that the movements were jerky and not smooth during voluntary muscle contraction, and they resembled myoclonic activity. The patient was felt to have intention or action myoclonus as a sequela to the hypoxic brain injury (Lance-Adams syndrome).[2] During sleep or complete muscle relaxation, no abnormal movements were noted. As soon as the patient started to contract the limb muscles, large-amplitude jerky movements of the limbs were initiated. This affected the trunk and extremity muscles and was worse in the lower limbs. Simultaneous EEG and EMG recording (see Figure 2) was performed five months after the accident. At rest, no abnormal EMG activity or EEG spike was noted. When the patient was told to gently and steadily contract the limb muscles, abnormal bursts or grouping of EMG activities were noted instead of the normal appearance of continuous interference EMG pattern. Spikes also appeared in the EEG, sometimes in association with the abnormal EMG bursts (see Figure 2). This was consistent with the clinical impression of Lance-Adams syndrome, a movement disorder that is difficult to treat. The patient was tried on various combinations of valproate, clonazepam, carbamazepine, and tryptophan with minimal control of the abnormal motor activity.

Patient 2

This 28-year-old man had generalized tonic-clonic seizures since the age of 18 years. There was a familial component to this disorder. His mother and two maternal uncles had either seizure disorder or complaints of "shakiness." About six years after the onset of the generalized seizure, the patient developed "drop attacks" and muscle jerkings without associated loss of consciousness. The drop attacks were usually precipitated by bright lights. On examination, frequent myoclonic jerks were observed. These may appear focally, and they usually involved the muscles of the distal upper extremities and around the lips. The trunk and proximal limb muscles were also affected at times. The myoclonus may be induced by action and was stimulus sensitive. It could be easily produced by peripheral stimulation such as tapping over a tendon. The induced myoclonus appeared in muscles ipsilateral and sometimes contralateral to the side of the stimulation. The resting EEG showed moderate generalized

slowing without epileptiform abnormality. However, photomyoclonic activity was induced during photic stimulation with bright flashes of light. SEP recording to median nerve stimulation at the wrist (see Figure 3) showed marked enlargement of the cerebral cortical responses (giant P25 and N33 Peaks). Following the enlarged cortical response were EMG activities occuring in different muscle groups ipsilateral and contralateral to the side of the electrical nerve stimulation. There was an orderly progression of the onset latencies of the EMG bursts in a rostrocaudal manner. That is, the latencies of the rostral muscle groups occurred earlier than those situated more caudally. The origin of the abnormal excitatory impulse appeared to be situated in the cerebral cortex. As the impulse traveled down the brainstem and spinal cord, it caused motor neurons to discharge, accounting for the muscle jerks and the orderly progression of the latencies of the EMG bursts. From the electrophysiologic study, the patient was felt to have cortical reflex myoclonus.

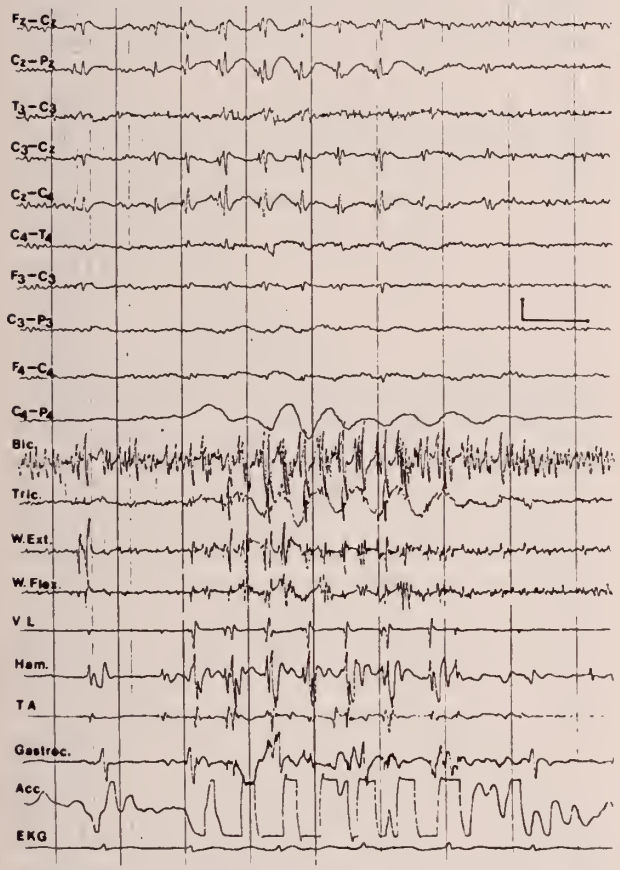


Figure 2. Simultaneous EEG and EMG recording on the same patient in Figure 1. This study was done several months after his recovery from the anoxic encephalopathy. The patient developed post-anoxic intention myoclonus (Lance-Adams syndrome). The EMGs were recorded from different muscles of the right extremities: biceps (Bic.), triceps (Tric.), wrist extensors (W. Ext.), wrist flexors (W. Flex.), vastus lateralis (VL), hamstrings (Ham.), tibialis anterior (TA), and gastrocnemius (Gastroc.). The accelerometer (Acc.) was attached to the upper arm to detect mechanical movements. An EKG lead was also attached. This recording was done when the patient was told to voluntarily activate his extremity muscles by raising the right arm or leg. Note the jerky movement during muscle activation (instead of a smooth contraction) as indicated by the accelerometer (second channel from the bottom). The jerks have irregular amplitude. Short bursts of EMG activity are present in the muscles with the jerks. Corresponding to some of the muscle jerks are epileptiform spikes in the EEG recording and they are maximal over the midline (Cz) scalp region (first and second, fourth and fifth channels from the top). No EEG spikes or spontaneous EMG bursts were seen during complete muscle relaxation. Vertical calibration is 70 uV for the EEG and EMG channels. Horizontal calibration is 1000 msec for all the channels.

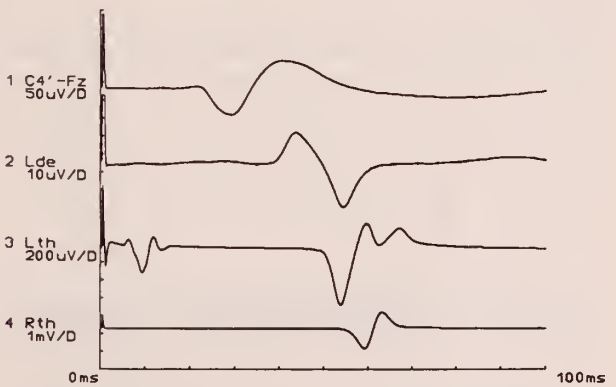


Figure 3. Simultaneous cortical SEP and EMG recording on a patient with generalized tonic-clonic epilepsy and reflex-induced myoclonus. The left median nerve was electrically stimulated at the wrist and the cortical sensory response was recorded over the contralateral scalp overlying the somatosensory cortex (C4') referred to a midfrontal electrode (Fz). The EMG responses were recorded from the following muscles: left deltoid (Lde), left thenar (Lth), and right thenar (Rth). Note the extremely enlarged or giant cortical somatosensory evoked response (first channel). In normal individuals, the amplitude of this cortical response is only a few microvolts. Following this cortical discharge are EMG activities that were reflexly activated by the sensory volley. In the third channel, note the small EMG activity preceding the larger EMG burst. The first EMG burst is the direct response of the thenar muscles to median nerve stimulation at the wrist, and the larger and later-occuring burst is the reflex muscle response. Proximal, distal, and contralateral muscles were affected. Recordings on different muscles showed an orderly progression of the onset latencies of the EMG bursts in a rostrocaudal direction. The origin of the impulse that activated these muscles was felt to be in the cerebral cortex which was hyperexcitable to peripheral sensory stimulation.

Because of the bilaterality of the muscle discharges, there may have been cortical-subcortical or corticoreticular interaction. The clinical course and electrophysiologic data strongly suggested that the patient had a progressive type of myoclonic disorder. However, the exact etiology of his condition was not known. The patient was an inmate at the state penitentiary and was lost to medical follow-up shortly after his release from prison. The presence of a giant cortical SEP in patients with myoclonic disorders usually entails a poor prognosis. They are frequently associated with a progressive disorder such as Lafora body disease, cherry-red spot myoclonus syndrome, or neuronal ceroid lipofuscinosis.[1] Giant SEPs are not found in the benign non-progessive myoclonic disorder. Thus, in this patient, the electrophysiologic study provided not only an insight into the mechanism of the muscle jerks but also helped in terms of prognostication.

Patient 3

This 77-year-old man had chronic myelogenous leukemia and renal failure. The serum creatinine and blood urea nitrogen (BUN) were elevated and the serum calcium was low. He presented with abnormal involuntary "muscle jerking." The patient had no history of seizure disorder nor prior episodes of a disorder of movement. These jerky movements occurred diffusely involving not only the extremities, but also the face, jaw, and neck. When the patient was asked to try to relax his muscles, these jerky movements diminished. During sleep, these abnormal movements were not present. When the patient was instructed to steadily contract a muscle to maintain a posture, there were intermittent brief lapses in the assumed posture strongly suggesting the presence of asterixis. Although the "jerking" was significantly reduced when the patient appeared to be relaxed, occasional abnormal movements were still noted. It was not clear clinically whether he may also have had myoclonic jerks in addition to the asterixis, or that they were simply "jerky" movements related to brief inhibition of muscle tone due to the asterixis. The EEG showed presence of diffuse slow activities and no epileptiform abnormality. Surface EMGs were recorded from muscles that showed frequent abnormal movements. At rest, no spontaneous bursts of EMG activity were noted to suggest the presence of a myoclonic disorder. During sustained voluntary muscle contraction, normal continuous EMG interference pattern was noted. However, from time to time, there was a brief gap or pause in the EMG activity (see Figure 4). This short interval of EMG silence usually lasted for about 100 msec. The short pause in the EMG was the electrophysiologic correlate to the brief loss in muscle tone that led to a temporary failure in maintaining a posture (asterixis). From the EMG recording, it was concluded that the patient had purely asterixis without an added component of a myoclonus. No further treatment was needed to control the abnormal movement except to improve his general metabolic condition.

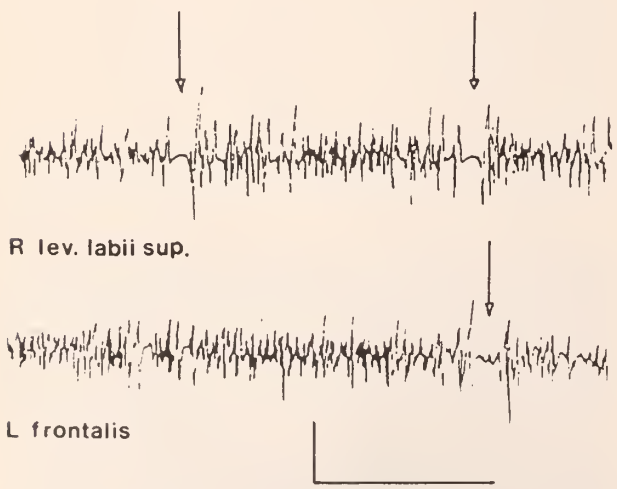


Figure 4. EMG recording on an elderly man with renal failure. Clinically, he had generalized asterixis including the cranial musculature. Surface recording electrodes were attached to the following facial muscles: right levator labii superioris (R lev. labii sup.) and left (L) frontalis. The patient was instructed to voluntarily and tonically contract these facial muscles. During tonic muscle contraction, the EMG was characterized by the continuous and interfering pattern of the motor units. From time to time, the patient would suddenly lose the ability to maintain a continuous contraction. These brief lapses in muscle contraction are reflected in the recording as short periods (100 msec) of EMG silence (see arrows) interrupting the on-going EMG activity. Vertical calibration is 150 uV. Horizontal scale is 1000 msec.

The quick movement related to the brief loss in postural tone in asterixis may at times superficially resemble a muscle jerk or myoclonus. However, asterixis does not constitute a muscle jerk, since no active muscle contraction is involved during the abnormal movement. In fact, it is the inhibition of muscle contraction that produces the postural instability. Clinically, at the bedside, asterixis is usually not difficult to recognize. In this patient, however, the asterixis was severe and generalized, involving not only the extremity and axial muscles but also the cranial muscles.

Asterixis usually appears in conditions producing a systemic toxic or metabolic abnormality. It is fre-

quently bilateral, although on rare occasions, it may occur only unilaterally. The occurrence of a focal or unilateral asterixis strongly suggests the presence of a central nervous system structural lesion rather than a metabolic abnormality,[3] and thus should be investigated accordingly.

Patient 4

This 12-year-old boy had chronic renal failure since infancy because of renal dysplasia and subsequently received a kidney transplant. He was readmitted to the hospital because of increasing renal failure, with the impression that this might be related to rejection of the transplanted organ. Serum creatinine and BUN were elevated and serum calcium was low. He had prior episodes of generalized tonic-clonic seizures and was treated with anticonvulsants. An EEG that was done a month before this admission showed mild to moderate diffuse slowing of the background with intermittent presence of rhythmic delta activity bilaterally. Occasional small-amplitude poorly-defined negative spikes were also present bilaterally. While in the hospital, he was noted to have frequent irregular "muscle jerks" involving primarily the extremities. There were concerns as to whether they may have been related to poor control of the seizure disorder or they might represent myoclonic jerks. The clinical examination suggested that these "jerks" were due to asterixis. EMG recording of representative extremity muscles showed no abnormal bursts of EMG activity at rest and during action to suggest the presence of a myoclonic disorder. When the patient was instructed to steadily maintain a posture with his limbs, brief periods of electrical silence were noted in the EMG, interrupting the normal ongoing electrical activity related to the tonic-voluntary muscle contraction (see Figure 5). Coincident with this period of EMG silence was a brief lapse in posture maintenance, resulting in a "jerky" motion of the limb. With the available clinical and electrophysiologic findings, it was concluded that these abnormal movements were purely related to asterixis. The child did not have myoclonus, and there was no exacerbation of his seizure disorder by the uremic condition. No specific treatment was necessary except to improve the abnormal metabolic state, and there was no need to manipulate the anticonvulsant regimen. However, this drug therapy was monitored carefully since it has been reported that anticonvulsants may induce asterixis.[4, 5]

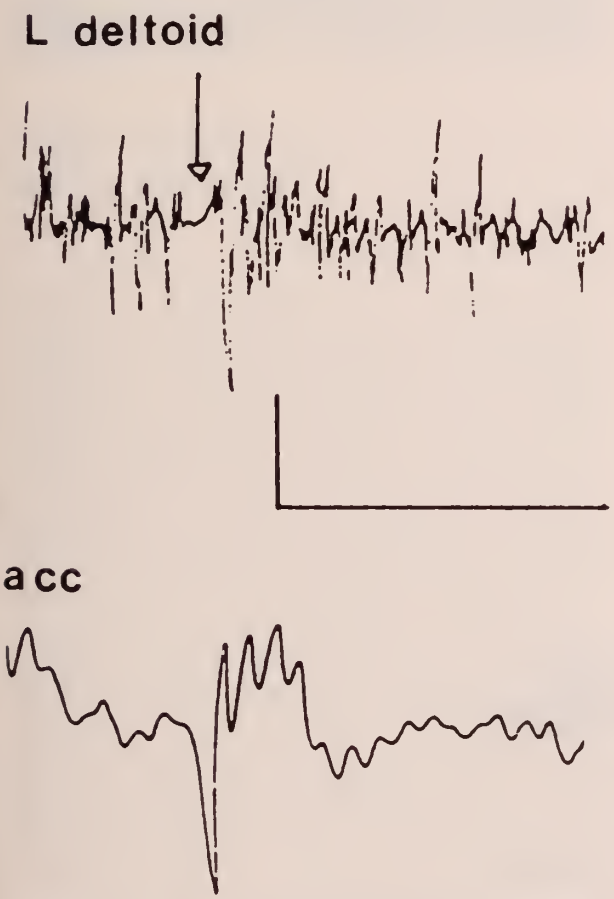


Figure 5. This recording was done on a boy with chronic renal failure. He had asterixis involving the extremities. EMG was recorded from the left (L) deltoid muscle, and the accelerometer (acc) was attached to the middle portion of the upper arm. The patient was instructed to abduct the arm at the shoulder and maintain it at 90 degrees. The EMG (top channel) shows a continuous and interfering pattern of the motor units related to tonic contraction of the deltoid muscle during maintenance of the posture. On occasions, there were brief lapses in maintaining the posture characterized electromyographically as brief periods of electrical silence (see arrow). Coincident to the period of the EMG silence is the sudden appearance of a large deflection in the accelerometric recording (bottom channel) reflecting the brief loss of posture maintenance. Vertical scale is 200 uV for the top channel and 70 mV for the bottom channel. Horizontal scale is 1000 msec for all channels.

Discussion

Although muscle jerks may be easily recognized, the etiology of this sign or symptom is diverse. Oftentimes, the exact cause of the condition is not known and treatment of the abnormal movement is primarily symptomatic. By utilizing a few basic recording procedures such as EEG, EMG, and evoked potentials, abnormal movements can be analyzed in fine details, and this may assist the clinician in narrowing the differential diagnosis and perhaps suggest the appropriate treatment. Electrophysiologic

recordings are sensitive procedures. However, they frequently lack specificity and should not be relied upon solely in making the diagnosis. Electrophysiologic studies are but an extension of the clinical examination. As in all proper examinations, these studies should be flexible and not merely routine procedures, conforming and adapting to a specific problem at hand. ★★★

Dr. Wee: 2500 North State Street (39216)

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SPECIAL ARTICLE

Report of Activities, Fiscal Year 1989: Medical Licensure Board

FRANK J. MORGAN, M.D.
Jackson, Mississippi

CREATED BY THE Legislature of 1980, the Board of Medical Licensure, consisting of nine physician members, is responsible for setting policies and professional standards regarding the practice of physicians, osteopathic physicians and podiatrists; considering applications for licensure, conducting examinations for licensure; investigating legitimate drug traffic among medical practitioners under the Uniform Controlled Substances Act; conducting investigations in disciplinary matters involving violations of state and federal laws, probation, suspension and revocations of licenses; considering petitions for termination of probationary and suspension periods and restoration of revoked licenses; promulgating reasonable rules and regulations necessary to enable it to discharge its functions; and enforcing the provisions of the law regulating the practice of medicine.

During Fiscal Year 89, the Board met in regular session six times wherein four formal hearings were conducted. As a result, two medical licenses were revoked, one medical license was suspended and the application for one medical license by reciprocity was denied.

Nine DEA Certificates were surrendered in whole or in part; seven for chemical dependency, one for excessive prescribing of controlled substances and one for unprofessional conduct.

In other actions, ten petitions for removal of restrictions on medical licenses were considered with the Board denying seven and granting three. Fourteen physicians had their controlled substances prescribing privileges partially restored and four physicians were denied permission to reregister with the Drug Enforcement Administration for prescribing privileges in certain schedules.

Seventeen physicians entered into a Consent Agreement with the Board whereby three licenses were placed on probation, nine licenses were suspended, suspension stayed with probationary terms and conditions; one license had restrictions placed on it and two licenses were surrendered voluntarily. One license was suspended indefinitely.

The organization of the support staff for the Board provides for two divisions: Licensure and Investigation.

Licensure

The Licensure Unit, during FY89, had 781 practitioners request applications for licensure by reciprocity. Based upon these requests, 401 applications were processed and approximately 6,416 reference inquiries were made.

Following receipt of favorable credentials, a total of 288 physicians, seven osteopathic physicians and six podiatrists were licensed. Additionally, 124 physicians who passed FLEX in FY88 and completed one year of postgraduate training were issued medical licenses, bringing the total licensed in FY89 to 425.

The nationally administered Federation Licensing Examination (FLEX) was adopted as the state's medical licensing examination in 1973. The three-day FLEX is a written objective-type comprehensive examination which tests applicants in the basic sciences, clinical sciences and clinical competence.

Delivered by Frank J. Morgan, Jr., M.D., Executive Officer, Medial Licensure Board, to Board of Trustees, Mississippi State Medical Association, at its winter meeting in Jackson, December 16, 1989.

Component I is designed to evaluate measurable aspects of knowledge and understanding of basic and clinic science and the ability to practice in a supervised setting. Component II focuses on critical abilities and knowledge required for diagnosis and management of selected ambulatory and in-patient clinical problems representing a core of clinical situations frequently encountered by the physician licensed for the independent practice of medicine. A score of 75 is required on each component for passing. The FLEX is given in June and December of each year, the dates being set by the FLEX Board of the Federation of State Medical Boards of the U.S., of which this Board is a member.

During FY89, 106 applicants were declared eligible and took the examination. Only two candidates from UMC failed one component of the examination, but at the next examination offering, both passed.

On May 1, 1988, the Board amended its regulations to require applicants who otherwise possess all of the qualifications for licensure by reciprocity/endorsement, but have not been examined for licensure in a 10-year period prior to filing his or her application must pass either Component II of the FLEX or the Special Purpose Examination (SPEX) unless the applicant is certified currently by an AMA recognized Specialty Board or AOA approved Specialty Board or submits proof that he/she is seeking licensure to serve as Dean, Chairman of a Department, or member of Faculty at UMC.

SPEX, which has been offered here since March 1988, is made available for quarterly administration: March, June, September and December. The June and December SPEX administrations are set to coincide with the last day of the respective three-day FLEX administration. To date, 18 candidates have taken this exam with only three being unsuccessful.

Thirty seven limited institutional licenses were issued during FY89; 587 certifications of medical license were completed and approximately 9,000 verifications of individual medical licenses were made by the Board.

Presently, there are 5,877 physicians licensed to practice medicine in Mississippi. Of these, 3,781 reside in-state and 2,196 reside out of state. Of these, there are 98 osteopathic physicians; 65 in state, 33 out of state. A total of 52 podiatrists are licensed; 30 in state, 22 out of state.

An increase in annual renewal fees went into effect on May 1, 1989 in order to continue present functions of the Board and support future plans of the agency.

Investigations

251 complaints were received by the Board for fiscal year 89. A total of 65 practitioners or individuals were investigated with 471 pharmacies being profiled for physician prescribing activity throughout the state. Analysis of the 65 investigations revealed 48 practitioners were excessively prescribing controlled substances; ten were personally abusing controlled substances, two involved unprofessional conduct; two involved the illegal practice of medicine, one for violation of Consent Order and two were compliance investigations based on Board order. Fifty specimens were collected for urine screens and submitted for testing. Five audits of dispensing physicians were completed.

For several months now, the investigative staff has been involved with several large cases. One of these was finished earlier this week; two others will be heard by the Board on January 18; one other is still on-going, and one, a joint effort among state and federal agencies, was served Thursday afternoon (December 14, 1989) with a summons and affidavit for a board hearing.

The budget request filed for FY91 asks for two additional investigators which will make a total of five. With only three, it is impossible to keep up with all complaints filed with the Board. For example, complaints received in office:

From July-December 1988-93

From July-December 1989-173

This reflects an almost 50% increase during this year. Even though the ideal would be to investigate every complaint filed with the Board, it is just not possible to accomplish this task with present staff. Consequently, the Board establishes priorities which are in keeping with Board policies and regulations. We must have additional investigative staff to handle the increased load.

Since July, 1989, the Board has functioned without two of its nine members. However, Billy Wayne Long, M.D. of Jackson, was appointed by Governor Mabus to fill one position and made his first meeting on November 15. The position left vacant by the untimely death of Edward Pennington, M.D., on July 7, 1989, remains vacant although names for an appointment have been submitted to the Governor by MSMA. Other members of the Board are: Charles R. Jenkins, M.D., Gilbert R. Mason, M.D., Walter H. Rose, M.D., Matthew J. Page, M.D., T. Steve Parvin, M.D., Richard F. Riley, M.D., and W. W. Walley, M.D.

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The Physician-Patient Privilege: The Practical Necessity of a Written Patient Waiver

ROBERT A. BIGGS, III, J.D.
ROBERT L. SPELL, J.D.
Jackson, Mississippi

Communications between physician and patient have been protected from disclosure to third parties with the enactment of state statutes. The medical privilege, as it is commonly known, now embodied in Rule 503 of the Mississippi Rules of Evidence, contains the limiting language that the privilege is waived only to the extent that the patient places his medical condition at issue in a judicial proceeding. The authors note that this oftentimes forces the physician to make difficult decisions concerning what information, if any, is to be disclosed to an outsider to the physician-patient relationship. It is therefore prudent for the physician to insist upon a carefully worded written authorization, executed by the patient, prefatory to release of any such information.

In today's highly litigious society, physicians are being called upon with greater frequency to provide otherwise confidential information about their patients to third parties. These strangers to the physician-patient relationship, finding themselves in lawsuits in which they are called upon to reimburse a physician's patient for injuries, understandably seek to determine just what those injuries are. On the other hand, patients sensitive to the disclosure of their physical condition, and oftentimes desirous of keeping from the defendant information which may prove useful to him in trial, seek to keep as much of their private life from disclosure as is possible.

Caught in the middle of this struggle is the physician who is torn between the obligation of confidentiality which he owes to his patient and the concomitant obligation of assisting in the resolution of disputes which he owes to society.

Under the relevant Rules of Procedure prevailing in Mississippi, a patient who files suit is deemed to have waived the physician-patient privilege to the extent that his lawsuit places his medical condition in issue. Does it necessarily follow that a physician may, in the context of such a lawsuit, disclose information obtained in treatment of his patient, without first obtaining a written authorization from the patient? In light of the language of the waiver rule and recent Mississippi Supreme Court cases interpreting the rule, the answer to that question is fraught with so much uncertainty that the practical answer must be no; and it is the wise, if not cautious, physician who insists on a written authorization prior to disclosing information regarding his diagnosis and treatment of a patient with those outside the physician-patient circle.

*Mr. Biggs is a member of the Mississippi State Bar and a partner in the Jackson law firm of Edmonson, Biggs & Jelliffe.
**Mr. Spell is a member of the Mississippi State Bar and an associate in the same firm with Mr. Biggs.

Development of the Physician-Patient Privilege

Legal recognition of both the existence and the extent of the physician-patient privilege by the judicial system has been neither consistent nor uniform. According to English common law, courts did not recognize a physician-patient privilege. The physician was instead free to divulge in open court the confidences gained in treating patients, subject, if at all, only to the ridicule of the profession for violating a time honored tradition. As one early English Justice wrote: "If a surgeon was voluntarily to reveal these secrets, to be sure, he would be guilty

of a breach of honor and of great indiscretion: but to give that information in a court of justice, which by the law of the land he is bound to do, will never be imputed to him as any indiscretion whatever."[1]

Guided by a policy perception that a private and uninhibited dialogue between physician and patient would inevitably promote an accurate diagnosis and more thorough and appropriate treatment by members of the medical profession, states began enacting legislation creating a physician-patient privilege. By reducing the opportunity for public disclosure, it was thought, patients would be less concerned about the embarrassing and private nature of their condition and more focused on receiving full treatment and in achieving a cure. Ultimately, all but a handful of states have adopted such a privilege, which typically prohibits a physician from disclosing any information he becomes privy to while attending a patient.

In practice, however, the shortcomings of the rule became quite evident as patients, ostensibly concerned about public disclosures, began using the privilege to prevent antagonists from obtaining information valuable in court proceedings — court proceedings, initiated by the patient, where the patient makes otherwise full disclosures of his condition and even solemnizes his condition for all the world to see in the public court record. In an effort to alleviate these shortcomings, states began formulating exceptions to the privilege, particularly as the privilege applied to lawsuits in which the issue of the medical condition was initiated by the patient.

Typical of these enactments which have retreated, at least to some degree, from strict adherence to an all encompassing unqualified privilege, is current Mississippi Rule of Evidence 503. Articulating at the outset the existence of the physician-patient privilege, Rule 503 goes on to provide that a patient waives the privilege when he raises his condition in a lawsuit. Specifically, the rule provides that, "Any party to an action or proceeding subject to these rules, who by his or her pleading places in issue any aspect of his or her physical, mental or emotional condition thereby and to that extent only waives the privilege otherwise recognized by this rule."

A significant qualification to the waiver is apparent by the limiting language, that the patient waives the privilege only to the extent that he places his condition in issue in a judicial proceeding. In our present litigious society, many physicians are daily confronted with carte blanche requests for information regarding the patient's medical condition. These requests frequently demand a copy of the patient's file which could encompass information on medical problems which may or may not be related to the problem at issue in the litigation. If the request is through a court order or a *subpoena duces tecum*, the physician must strictly comply, but any request on a less formal basis should be carefully scrutinized by the physician. It is in the exercise of this judgment that the physician must proceed with caution.

Physicians Liability for Prohibited Disclosures

Because of the often embarrassing and highly sensitive nature attending patient disclosures and of the relative importance that they be disclosed to one treating the patient, there is an inherent right to confidentiality or right to privacy which attaches to these disclosures. Indeed, this "right" is as old as the Hippocratic Oath. But this right, as noted above, does not arise exclusively from the relationship of physician-patient: it is embodied in the positive law of many states as well.

Consequently, courts are recognizing, in an ever increasing frequency, that patients may enforce their right of privacy in courts of law when the physician invades the right by publicly disclosing privileged matter. Indeed, as noted by one court, states which have enacted physician-patient evidentiary privilege rules, as has Mississippi,[2] have been "almost uniform" in allowing a cause of action for unauthorized disclosure.[3] But, courts do not ground the physician's liability solely on the evidentiary rule. Instead, courts find the cause of action to have origins in other sources as well, such as, for example, rules of conduct imposed by the state's medical licensing authority and the fiduciary relationship between physician and patient.[4]

Whatever the origins, physicians making unauthorized disclosures of confidential information are finding themselves personally liable for their indiscretions. As one court summed up the matter, "We are of the opinion that the preservation of the patient's privacy is no mere ethical duty upon the part of the doctor; there is a legal duty as well. The unauthorized revelation of . . . any confidential communication given in the course of treatment, is tortious conduct which may be the basis for an action in damages."[5]

The Physician's Dilemma

Courts which have upheld a cause of action against a physician for unauthorized disclosure, however, have not, as a rule, done so blindly, and many recognize that a patient's right of privacy is not absolute. These courts have established exceptions

to the patient's right of privacy where the public interest so demands. Thus, where the public interest requires that a patient's confidence be revealed, the patient will not be heard to complain if the physician heeds that interest and reveals his patient's confidences.

Mississippi Rule of Evidence 503, which provides for waiver of the physician-patient privilege at least to the extent that the patient, by his pleadings in a lawsuit, places his medical condition in issue, is one instance where the state has declared that the interest of the public exceeds that of the patient. Ironically though, it is this declared public policy weakening the privilege without abolishing it, that creates a dilemma for the physician who must now balance a patient's right of privacy, the invasion of which exposes the physician to personal liability, on the one hand, with the interest of the public on the other.

Evidence Rule 503 is not an absolute waiver of the privilege; it is a qualified waiver. Thus, while a patient may waive the privilege as it relates to one aspect of his medical condition, such waiver may not necessarily operate to authorize physician disclosures of other aspects of the patient's physical state. Prior to making a disclosure then, the task falls upon the physician to determine just what aspects of the patient's condition may permissibly be disclosed. This, however, is not an easy task, particularly to one untrained in the nuances of the law and unfamiliar with the circumstances of the patient's lawsuit.

Under the applicable rule, a patient waives the privilege in judicial proceedings, but only to the extent that the formal pleadings he or she files with the court places the medical condition in issue. This formulation of the waiver rule requires physicians to consider not one but two relevancy inquiries before disclosing a patient's confidences: (1) what medical condition is, by the allegations contained in the pleadings, in issue; and (2) what aspect of the patient's treatment relates to the particular condition in issue.

At times, resolution of these two inquiries will be easy. It is obvious, for example, that a patient, suing to recover for injuries sustained in a motor vehicle accident, does not waive the privilege as to the heart surgery he underwent two years earlier. But, other privileged matters are not so easily characterized as being waived or not waived. This is especially true with regard to the question of what aspect of the treatment relates to the condition in issue, as is made quite apparent in the Mississippi Supreme Court's recent pronouncement in *Sessums v. McFall & Tri-County Home Health Care, Inc.*, decided in August, 1989.[6]

In *Sessums*, a plaintiff was involved in a motor vehicle accident and presented himself to a physician for treatment of the injuries he sustained. While relating his medical history, the plaintiff candidly remarked to the physician that he was not keeping a proper look-out and simply pulled out in front of the defendant, a fact that was duly noted by the physician and was thus embodied in his written records. The defendant, for obvious reasons, sought to use the physician's history in his case as an admission against the patient's interest. The defendant did not, however, ask the physician to testify about the plaintiff's injuries or his treatment.

Although the history taken by the physician in *Sessums* clearly related to the injuries forming the basis of the lawsuit, the Supreme Court ruled that the privilege had not been waived as to the plaintiff's statements contained in the history. The Court reasoned that the ultimate issue was the cause of the accident and the patient's statements related to that issue rather than his medical condition

The *Sessums* case represents a very narrow construction by the Court of the waiver rule and is illustrative of the difficulties involved in its analysis. The case clearly points up the perilous distinctions which must be made in determining to what extent the privilege has been waived. Not only must the physician determine whether the particular condition is in issue, but he must go further and also determine what aspect of that condition is in issue. This kind of determination is obviously a mixed analysis — part medical, part legal, and it is rather unfair for a physician, untrained in the law and quite often unfamiliar with the articulated allegations of his patient's legal pleadings to be forced to make. Moreover, this unfairness is multiplied when it is considered that should the physician guess wrong and disclose privileged information, he may well risk personal liability for invading the privacy of his patient

Avoiding Liability

The physician-patient privilege found in Mississippi Rule of Evidence 503, together with the waiver of the privilege likewise contained in that rule, is first and foremost a rule of evidence. In essence what it says is that a patient may not maintain a lawsuit in which he places his medical condition in issue and also insist that the privilege be enforced. In light of both the tendency of courts to base a physician's liability for unauthorized disclosures on duties outside of such evidentiary rules and the com-

plexity of the waiver determination under Rule 503, the prudent course for the physician to pursue is to insist, prior to discussing patient confidences with others, on a carefully drafted written authorization signed by the patient allowing the physician to discuss all aspects of the patient's medical condition with specified individuals.

Such an authorization would ideally authorize the physician not only to allow the specified individuals to view and copy all medical records, but would also authorize the physician to communicate directly, and privately, with those individuals seeking information. Additionally, the authorization should allow the physician to discuss all aspects of the patient's medical condition, or at least, authorize the physician to discuss all aspects up to and including a date certain. This practice should eliminate an improvident disclosure of privileged information and thereby safeguard the physician from potential legal liability.

Moreover, as earlier stated, if patient information is disclosed through an appropriate court order or *subpoena duces tecum*, in most instances the physician should be protected from any liability assuming strict compliance with the order or subpoena.

Conclusion

Given the complicated nature of determining the extent of a patient's waiver, the existence of other confidentiality duties imposed on the physician beyond the Rules of Evidence, and the potential for personal liability for disclosing a patient's secrets, when asked to make any patient disclosures, the most prudent course for the physician is to insist on a written authorization from his patient. This should be done in spite of the fact that the patient may to some degree, have waived the physician-patient privilege through the filing of his or her lawsuit.

★★★

P.O. Box 865 (39205)

References

1. McCormick, *Evidence*, § 98, p. 212 (2nd Ed. 1972).
2. Mississippi's rule is found at Mississippi Rule of Evidence 503.
3. *Horne v. Patton*, 291 Ala. 701, 187 So.2d 824 (1973).
4. *Id.*
5. *Id.*
6. Miss. Sup. Ct. No. 58, 540 (decided Aug. 2, 1989, but not yet reported).

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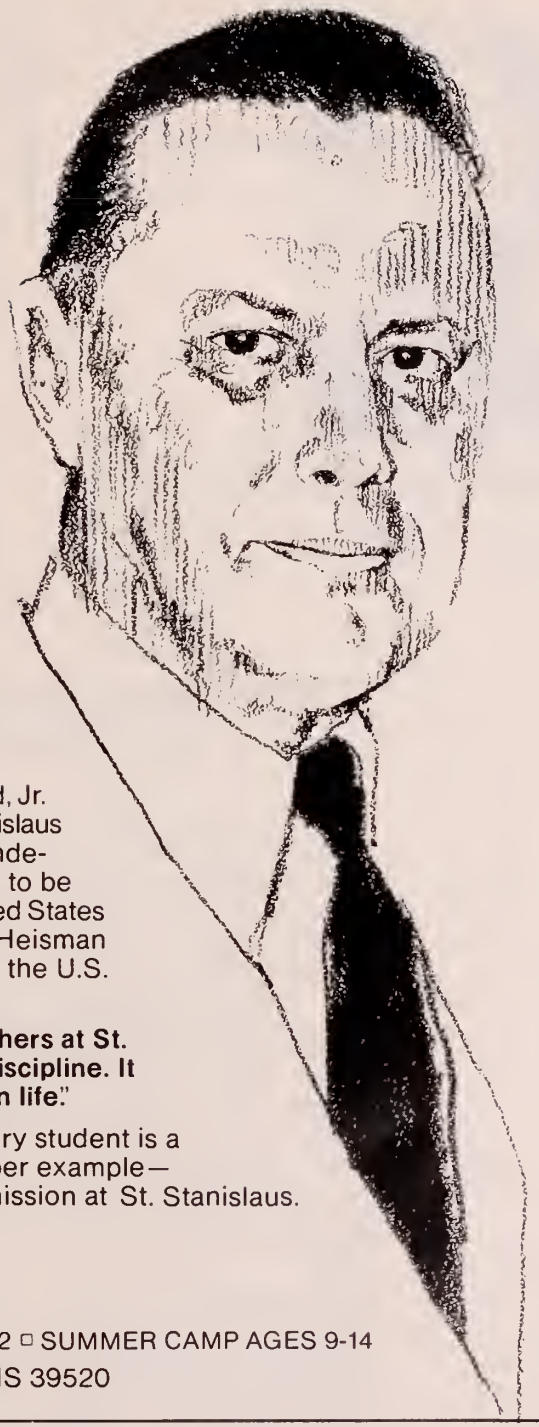


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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

AMA Leadership 1990 — A Light at the End of the Health Care Delivery Tunnel

NOT ONLY was the February weather warmer in Phoenix (vs. Chicago) for the AMA 1990 Leadership Conference, but the entire approach by representatives of government, labor, manufacturers, insurance, and medicine was much less cool.

For the first time in my recent memory (most of my memory is recent) an entire roundtable discussion by all the major players (Congress, labor, business, insurance) did not use America's physicians as scapegoats and did not even once insinuate that physicians' fees and activities were the cause of the health care crisis for the 31 to 37 million uncovered and uninsured citizens in the United States. To me this was not only refreshing but gave cause to feel genuinely optimistic that we can and will address and solve the access, cost and quality of care issues facing us in health care delivery.

Interestingly enough, it seemed that the other players were quite willing to compromise for the first time. They were willing to alter their previously solid positions and come around to consider the solution offered by the American Medical Association. That is to say, while organized medicine's view seemed to change little or any at all, labor, business, insurance and even congressional representatives and administrative officials seemed to see potential solutions that were very similar to what the AMA has been proposing all along.

Other highlights of the AMA Leadership Conference were the fact that Mississippi had 25 representatives taking part in the sessions. We are honored to hear "the conscience of American physicians," the Honorable C. Everett Koop give a most thought-provoking and emotionally moving and truthful talk about American physicians and the American health care situation. It would behoove each one of us to read and listen to that talk on a frequent basis. (An audiotape is available.)

We were also honored to have the new health care financing agency secretary there — Mrs. Gail Wilensky, who appeared to be extremely open-minded, level-headed, and obviously quite capable of handling the myriad of problems facing HCFA in the next few years. My impression was that we at last have a HCFA Director who will be willing to listen and try to solve some of the bureaurocratic problems that we have had to face in the past.

The AMA unveiled its proposal to improve access to affordable quality health care in the United. States. This new initiative is entitled "Health Access America." This is a 16 element proposal by the AMA that builds on the strengths of our present health care

(Continued on page 133)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION
VOLUME XXXI, NUMBER 4
APRIL 1990

Health Hazard Supreme

Football can be hazardous to your health! The events of this past autumn, particularly the unusually large number of devastating cervical spine injuries in Mississippi and Louisiana, have served to remind us that playing football, even in the best of circumstances, can be risky. However, even more frightening is the fact that proper health supervision is not present at most practices and games below the college level of competition. The presence of qualified athletic trainers at these events has the potential to make a significant difference in both the prevention of injuries and in the proper management of those injuries which inevitably occur.

It seems logical that the physicians in the state of Mississippi should support legislation to require the presence of qualified athletic trainers and/or physicians to insure appropriate care for our young people who elect to participate in organized sports. It is true that additional resources would be required to provide such a program. For example, appropriate personnel would have to be located and trained, qualifications would have to be established, and funds would have to be provided. Such a program should be cost effective, considering that the prevention of one quadriplegic would probably pay for the program for several years.

We owe it to our children to insure that this need does not go unmet.

GEORGE ABRAHAM, M.D.
Associate Editor

THE PRESIDENT'S PAGE

(Continued from page 132)

system. In addition, it has elements to resolve the majority of the access problems. Medicaid and Medicine reform, employer-employee provisions for health insurance, state level risk pools to cover the uninsurable, expanded long-term care financing, professional liability reform, developing professional practice parameters, and increasing health promotion and disease prevention strategies are just some of those elements. There are many other parts to this proposal that you will be reading about in the near future. It's an exciting time in America for a potential solution to our health care crisis.

So, as we enter the first quarter of the last decade of the 20th century, for the first time I can see some light at the end of the tunnel of health care access, cost and quality that has previously been described as a tunnel with no end.

This is a problem that will take the unique and unusual cooperative efforts of all parties involved including American medicine, which should be in the lead. The United States Congress will have to show some initiative and intestinal fortitude and "biting of the bullet." The insurance industry must admit that they are part of the problem and be more innovative in their programs. Businesses, both small and large, must make additional sacrifices, and labor must compromise in its positions. State and federal government administrations must be less political and more solution-oriented in the future.

When all of this comes to pass, we must remember that there will still be those patients who will need compassionate, quality and affordable health care, and who have no means of financing that care.

Our history of taking care of those patients will need to continue. We will and should always be their "lamp of hope."

Medico-Legal Brief

Prisoner Who Opposes AIDS Testing Loses Suit

Mandatory AIDS testing did not violate a prisoner's Fourth Amendment rights, a federal appellate court for Oklahoma ruled.

The prisoner filed an action against prison officials, contending that they forced him to submit to the blood test by threatening him with disciplinary segregation. He contended that his rights under the First and Fourth Amendments had been violated. The federal trial court dismissed the complaint.

On appeal, the federal appellate court said that in or out of prison, the prisoner had only a limited privacy interest in not having his blood tested. The court pointed to the use of blood testing of drunken driving suspects. Further, the prison had a strong interest in determining what members of the prison population had AIDS, which outweighed the prisoner's expectation of privacy, the court said. Although a review of the record did not reveal whether there was a widespread AIDS infection among the prisoners, the court said that the prison could not determine the amount of infection without testing. The court held that nonconsensual testing for AIDS did not violate prisoners' Fourth Amendment rights.

The prisoner contended that AIDS testing served no legitimate purpose because, after identifying carriers, the prison did not treat or quarantine them. The court said that an alleged lack of current medical response to the problem did not mandate forbidding officials from continuing to collect information, since the prison would ultimately need to make decisions on segregation and treatment.

As to the prisoner's claim that the prison deprived him of First Amendment rights to freedom of religion, the court said that he did not accompany his allegation by details about his religious faith or allege what tenet of his faith required that he refuse the test. The court said that the mere assertion of generic religious objections was not sufficient to invoke First Amendment protection.

The court saw no merit in the prisoner's argument that he was entitled to a due process hearing before the prison threatened him with disciplinary segregation because of his refusal to submit to being tested for AIDS. The court said that since AIDS testing had been approved by the court as a general matter, an individualized due process hearing would not help the prisoner, as there were no factual or legal disputes to resolve. The court affirmed the lower court's judgment. — *Dunn v. White*, 880 F.2d 1188 (C.A.10, Okla., Aug. 1, 1989)



Doctor,

Have you ever looked for a different way to say "Thank You," "Congratulations," or "Get Well Soon"?

All of these messages are available, along with memorial tributes, in greeting cards from the MSMA Auxiliary. Each card signifies your donation to the AMA-ERF in the name of a friend or colleague.

For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Karen Stephens, 1105 Oakleigh Dr., Hattiesburg, MS 39401; telephone 264-0154.

MEDICAL ORGANIZATION

Senior Care Program Receives Service Award

The MSMA's Senior Care program has been selected by the Mississippi Society Council on Aging for an award recognizing contributions toward improving the quality of life for elderly citizens of the state.

Dr. J. Edward Hill, president of the MSMA, accepted the award at presentation ceremonies March 29 in Biloxi. The event was sponsored by the Mississippi Society Council on Aging and the Mississippi Gerontological Society.

Some 850 MSMA members are participating in the statewide Senior Care program, in which physicians volunteer to accept Medicare determined payments as the total charge for medical services they provide to the eligible Senior Care recipients, excluding deductibles and coinsurance. Eligibility for Senior Care is determined by each local Area Agency on Aging.

OBRA 89 Mandates New Clinical Lab Referral Restrictions

The Omnibus Budget Reconciliation Act of 1989 was enacted by Congress this past November. Among its many provisions was one which could have a severely limiting effect on physician ownership of clinical laboratories and should be of significant interest to physicians who have certain types of financial arrangements with the laboratories to which they refer patients.

As originally conceived and introduced by California Rep. Fortney "Pete" Stark, the bill applied to any financial relationship affecting referrals for Medicare and Medicaid patients. Although the Stark legislation was not acted on in the first session of the 101st Congress, one provision was pulled out of the bill and incorporated into the final version of the 1989 Budget Reconciliation Act. This surviving provision prohibits a physician from referring services to a clinical laboratory where the referring physician has a financial relationship with such laboratory.

Under terms of the Act, the financial relationship can exist directly between a physician and the laboratory or between an immediate family member of the referring physician. The relationship can be an ownership or investment interest, and even where there is no ownership interest a compensation arrangement between the parties may constitute a financial relationship.

Although the new law does provide several narrow exceptions to the prohibitions on clinical lab referrals, the vast majority of physicians having an ownership interest in a clinical lab may be barred from referring their Medicare and Medicaid patients to such a lab beginning January 1, 1992.

The Act requires that laboratories report to the Department of HHS on the Medicare and Medicaid services which they provide, together with the names and provider numbers of any physicians who own an interest in and are in a position to make referrals to the laboratory, as well as any immediate family members of the owners who are also in a position to make referrals.

Referring physicians and laboratories are both subject to sanctions and the denial of payment for services rendered in connection with a prohibited referral. Additionally, presenting a claim resulting from a prohibited referral may subject the requesting provider to a penalty of $15,000 and exclusion from participating in the Medicare and Medicaid programs. Failure to comply with the reporting requirements can also subject the party required to file a penalty of up to $10,000 for each day of noncompliance. Lastly, any physician or laboratory that enters into an arrangement designed to circumvent the Act may be subjected to a penalty of up to $100,000 and exclusion from Medicare and Medicaid programs.

As mentioned previously, the law does provide certain narrow exceptions to the prohibition against referrals to a clinical lab in which the physician has a financial interest. These exceptions are as follows:

Group practice laboratory services — exempts services that are performed within the referring physician's group practice, as long as the physician provides and bills substantially all of his or her services through the group.

Rural physicians — physicians owning labs in rural areas are exempt. "Rural area" is any area outside a Standard Metropolitan Statistical Area, but essentially any lab in the same locality as a hospital classified as "rural" for purposes of Medicare's prospective payment system would be considered rural.

Pathologists — clinical diagnostic lab tests and pathological examination services requested by a pathologist will not be considered a "referral" if the services are furnished by the requesting pathologist or are under the supervision of a pathologist pursuant to a request by another physician.

Physician interest in hospital — a physician may

OBRA/Continued

refer patients to a hospital laboratory, even if he has an ownership interest in that hospital, provided the referring physician is authorized to provide services at the hospital.

Securities ownership — an exception is provided for ownership of certain publicly traded securities such as stocks, bonds, debentures, notes or other securities in a publicly traded corporation, provided the corporation has assets in excess of $100 million.

Compensation arrangements — exceptions are provided for various kinds of compensation arrangements between referring physicians and clinical labs subject to future clarifying regulations by the Department of HHS. A "compensation arrangement" is defined as any arrangement for remuneration, whether directly or indirectly, in cash or in kind. Employment or service agreements between physicians and hospitals are also allowed if the services to be provided are specifically identified, the compensation to be paid is equal to the fair market value and *not* connected to the volume or value of referrals, and the agreement is commercially reasonable even if no referrals are made. Compensation arrangements between medical directors and clinical laboratories are allowed if the medical director position is required under certain federal laws, such as the Clinical Laboratory Improvement Act, and provided the same guidelines are met that apply to hospital services.

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. $12.95. 1989.

Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions. (Report of the U.S. Preventive Services Task Force). Michael Fisher, Editor. Williams & Wilkins, Baltimore. 1989.

122nd Annual Session Preliminary Program

Thursday, May 31

Exhibits
MSMA House of Delegates
AMSAODD Luncheon
MFMC Annual Meeting
HMSS/YPS Joint Session
Reference Committee Meeting
President's Reception

Friday, June 1

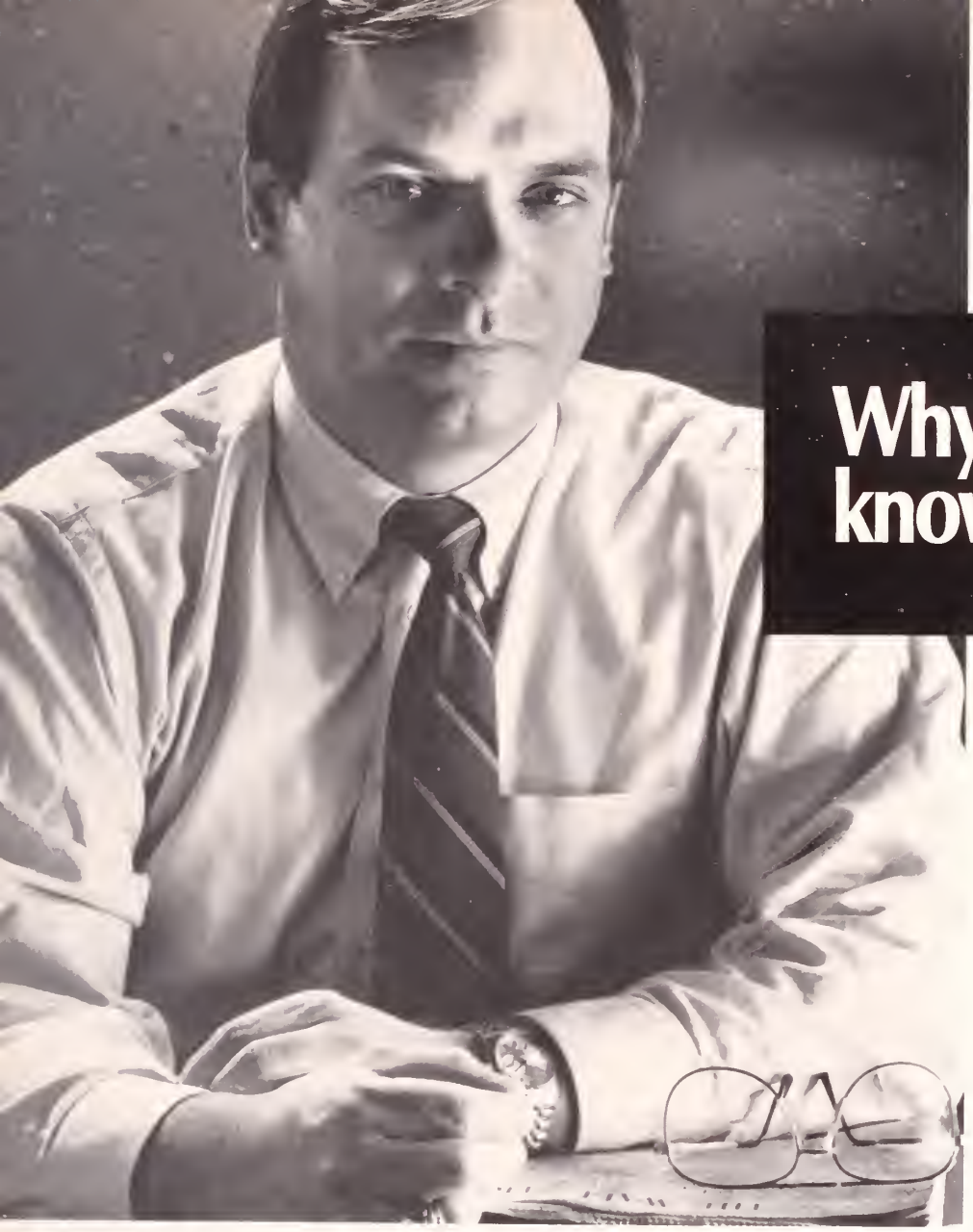
Exhibits
EENT Association
MSMA Past Presidents
Medicine Plenary Session
MS Academy of Family Physicians
MS Internal Medicine Society
MS Society of Plastic and Reconstructive Surgery
Medical Directors, Long Term Care Facilities
Reference Committee Meeting
MSMA Auxiliary House of Delegates
MSMA Auxiliary Luncheon
Alumni Receptions
MS Chapter, ACS Reception

Saturday, June 2

Surgery Plenary Session
MSMA Fifty Year Club
MS Chapter, ACS
MS Section, ACOG
MS Anesthesiology Society
MS Dermatology Society
MS Chapter, ACEP
MS Pathology Society
MSMA Auxiliary Past Presidents
MSMA/MSMA Membership Party

Sunday, June 3

Protestant Services
Catholic Services
MSMA House of Delegates



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Because Gary Bell is behind the new and progressive activities of Mississippi Methodist Rehabilitation Center in Jackson. As President and Chief Executive Officer of MMRC, one of the Southeast's few specialized physical rehabilitation facilities, Gary Bell is also serious about communicating with physicians and health care professionals.

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MSMA Membership Benefits

Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrative here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

HEALTH INSURANCE

MSMA members who are organized as PAs and wish to provide health insurance coverage for their employees are eligible to participate in a self-insured 501(c) (9) trust sponsored and administered by a subsidiary of the association. All MSMA members are also eligible to apply for health insurance programs offered by the American Medical Association. For further information contact Jackye Wiebelt at MSMA Diversified Services, Inc.

MEDICAL MALPRACTICE INSURANCE

The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

DISABILITY INCOME INSURANCE

Based on careful evaluation of the market and periodic reevaluation, MSMA endorses a disability income insurance program. MSMA members receive a discount and are assured of coverage by a reputable national company with a track record of writing coverage for professionals. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

LIFE INSURANCE

MSMA members by virtue of their membership in the AMA are eligible for a variety of life insurance programs sponsored by the AMA. Because of their size these programs can be offered at low cost group rates. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

MEDICAL SUPPLIES

MSMA members are eligible to participate in a group purchasing program for medical supplies. Professional Group Services offers a wide range of quality, low-cost equipment and supplies for the physician's office. For further information call Davis Richards at MSMA.

FINANCIAL/RETIREMENT PLANNING

MSMA members by virtue of their membership in the AMA are eligible to participate in AMA Investment Advisors, Inc. This wholly owned investment subsidiary of the AMA offers a wide range of investment opportunities tailored specifically for physicians. For further information call Davis Richards at MSMA.

PRACTICE MANAGEMENT

Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics from CPT-IV coding to patient surveys. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

DEBT COLLECTION SERVICE

Based upon sponsorship by medical associations in many states, IC System is endorsed by MSMA to perform debt collection services for offices and clinics of member physicians. IC System has a proven national track record as a debt collection service. For further information call Davis Richards at MSMA.

TRAVEL PROGRAMS

Each year MSMA selects several outstanding travel opportunities provided by INTRAV, a highly respected travel organization specializing in group travel arrangements. INTRAV's "frequent traveler" program attests to the satisfaction of its clients. For further information call Kay Gatewood at MSMA.

Information Sources

MSMA and MSMA Diversified Services — 735 Riverside Drive, Jackson, MS 39202; 601-354-5433 or 800-898-0251 (In-State Watts)

Medical Assurance Company of MS — 735 Riverside Drive, Jackson, MS, 39202; 601-353-2000 or 800-325-4172 (In-State Watts)

PERSONALS

OSSAMA AL-MEFTY of UMC spoke at the annual meeting of the North American Skull Base Society in Los Angeles.

DIANE BEEBE of UMC made a presentation at the annual Predoctoral Education Conference in San Diego.

BRYAN COWAN of UMC lectured at Ob-Gyn department educational meetings in Ann Arbor and Southfield, Michigan.

THOMAS FEDUCCIA announces the opening of his practice of family medicine at the office of KEVIN NICHOLS, 517 Center Avenue in Philadelphia.

SANDOR FELDMAN of UMC lectured at the Driscoll Children's Foundation Hospital in Corpus Christi, Texas.

RICHARD J. FIELD JR. of Centreville was visiting professor at Carraway Methodist Hospital in Birmingham, Alabama and spoke at the North Texas Chapter of the American College of Surgeons in Dallas, Texas. He also conducted a panel on breast cancer at the Southeastern Surgical Congress meeting in Naples, Florida.

WILLIAM R. FORD of Columbus was guest speaker at a meeting of the Columbus Area Epilepsy Support Group.

GEORGE FURR of Clarksdale was appointed to the advisory committee of the National Institute for Occupational Safety and Health (NIOSH) and attended a meeting of that organization's cancer screening committee in Cincinnati.

JUDITH GEARHART of UMC made a presentation at the annual Predoctoral Education Conference in San Diego.

C. E. GUICE, III, announces his association with LARRY DAY and ROBERT COLTHARP in the practice of otolaryngology and facial plastic surgery at 107 Millsaps Drive in Hattiesburg.

KENNETH HINES of Greenwood was speaker for a six-session course sponsored by the Leflore County Unit of the American Cancer Society.

MITCH HOLLAND of Brookhaven has been elected to fellowship in the American Academy of Pediatrics.

JAMES HUGHES of UMC made a presentation at the American Academy of Orthopaedic Surgeons annual meeting in New Orleans.

M. T. A. KHAN announces the opening of his practice in general surgery at 940 Matthew Drive in Waynesboro.

KENT KIRCHNER of UMC has been selected as a member of a research site team that will audit the Great Plains Region for peer review of research applications in Sioux Falls, South Dakota.

J. PURVIS MCLAURIN of Oxford has been appointed by Governor Ray Mabus to the Mississippi Board of Medical Licensure, filling the term of the late Dr. Edward Pennington.

PATRICK G. MCLAIN announces his appointment as medical director of the chemical dependency unit of Laurel Wood Center in Meridian.

JOHN W. MENARD announces the opening of his office in the specialty of plastic and reconstructive surgery at 525 Willowbrook Road in Columbus.



PERSONALS/Continued

JERRY MOORE of Philadelphia spoke on diabetes at a meeting of the Futura Club.

JOHN MORRISON of UMC coordinated the Controversies in Tocolysis Conference in San Antonio, Texas.

WILLIAM NICHOLAS of UMC spoke on diabetes to the medical staff in Lexington, Louisiana.

WALTER MOSES was speaker for a public education course sponsored by the Leflore County Unit of the American Cancer Society.

BRANTLEY PACE of Monticello spoke on "Aging and Caring for the Aged" at a meeting of the Twentieth Century Club.

SAM PACE of Tupelo has been named president of the Mississippi Gastroenterology Society and elected Governor for the state of Mississippi for the American College of Gastroenterology.

LESSA PHILLIPS of UMC spoke at the Kentwood (Louisiana) Rotary Club meeting and made a presentation at the University of Utah School of Medicine Family Practice Refresher Course in Salt Lake City, Utah.

TIMOTHY J. REYNOLDS has associated with the Laird Clinic in Union.

F. H. SAVOIE of UMC made a presentation at the American Academy of Orthopaedic Surgeons annual meeting in New Orleans.

KELLY SEGARS, SR., of Iuka has been elected chief of staff at Iuka Hospital.

SCOTT SEGARS of Iuka was recently appointed to the Board of Directors of First American National Bank.

THOMAS F. SCHEER announces the opening of his practice in radiation oncology at the Radiation Oncology Center, 1724 23rd Avenue in Meridian.

THOMAS A. WALKER and LYNN C. WALKER have associated with the Children's Clinic of Oxford for the practice of pediatrics and adolescent medicine.

KEITH WAGGONER has associated with DAVID GILDER and WILLIAM THOMPSON for the practice of family medicine at Yazoo City Medical Clinic, 805 E. Fifteenth Street in Yazoo City.

ROBERT WHITE, JR. announces the opening of his office for the practice of internal medicine at 101 Doctors Park in Starkville.

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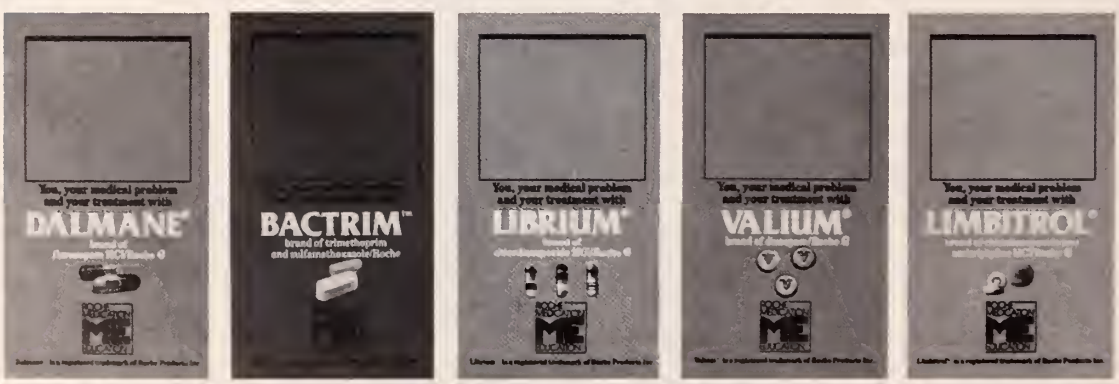
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JENNINGS, JOHN COLEMAND, Jackson. Born Cleveland, MS, Dec. 19, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and family medicine residency, University of South Alabama Hospitals, Mobile, 1985-89; elected by Central Medical Society.

KINSMAN, ROBERT LAWRENCE, Jackson. Born Besthesda, MD, June 6, 1950; M.D., George Washington University School of Medicine, Washington, DC, 1980; interned and emergency medicine residency, Brooke Army Medical Center, Ft. Sam Houton, TX, 1980-83; anesthesiology residency, University Medical Center, Jackson MS, 1987-89; elected by Central Medical Society.

WAGGONER, KEITH ALAN, Yazoo City. Born Long Beach, CA, Oct. 17, 1958; M.D., University of Mississippi School of Medicine Jackson, 1987; interned, same, one year; elected by Delta Medical Society.

ZURAWSKI, JEANETTE, Tupelo. Born Stevens Point, WI, June 30, 1951; M.D., Oregon Health Sciences University Medical School, Portland, 1985; physical medicine and rehabilitation residency, University of Kansas Medical Center, Kansas City, 1985-89; elected by Northeast Mississippi Medical Society.

KEZIRIAN, GUY MICHAEL, Hattiesburg. Born Providence, RI, Nov. 5, 1958; M.D., Brown University Program in Medicine, Providence, RI, 1984; interned, one year, Faulkner Hospital, Boston, MA; ophthalmology residency, Lenox Hill Hospital, New York, NY, 1985-88; fellowship, Albany Medical Center, Albany, NY, 1988-89; elected by South Mississippi Medical Society.

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DEATHS

Fortenberry, Frank R., Columbia. Born Yazoo City, MS, Jan. 1, 1925; M.D., University of Tennessee School of Medicine, Memphis, 1952; interned City of Memphis Hospitals, one year; family medicine residency, Huey P. Long Hospital, Pineville, LA., 1953-54; died Feb. 5, 1990, age 65.

POSTGRADUATE CALENDAR

April

Family Practice Update
April 8-11
Ramada Renaissance Hotel, Jackson

Injuries to The Neck in Athletes
April 11
Ramada Renaissance Hotel, Jackson
*This half-day program will be presented immediately following Family Practice Update.

Pediatric Advanced Life Support Provider Course
April 17-18
University Medical Center, Jackson

Pediatric Emergencies
American Academy of Pediatrics
Mississippi Chapter Spring Meeting
April 19-20
Ramada Inn Coliseum, Jackson

Advanced Trauma Life Support Proviver Course
April 26-27
University Medical Center, Jackson

Advanced Burn Life Support Provider Course
April 30
University Medical Center, Jackson

May
Renal Update 1990
May 2-3
Ramada Inn Coliseum, Jackson

June
Neurosurgical Society Annual Meeting
June 15-16
Ramada Renaissance Hotel, Jackson

Occupational Medicine Conference
June 21
Hinds General Hospital, Jackson

Clinical Lipids Disorders
June 23
Ramada Renaissance Hotel, Jackson

Advanced Trauma Life Support Instructor Course
June 25-27
University Medical Center, Jackson

For more information or a program brochure, contact the UMC Division of Continuing Health Professional Education, the University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216-4504; or call (601) 985-1300. The Medical Center offers equal opportunity in all its programs and services.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. James Clarkson, Secy., P.O. Box 128, Biloxi 39533. Counties: Hancock, Harrison, Stone.

Delta Medical Society. 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. Tom Stanford, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Melissa Dockery, Secy., 830 Medical Center Dr., West Point 39773. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. Paul Moore, Jr., Secy., 1214 Farnswort Ave., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society., 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Robert Clingan, Secy., 100 McCauley Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Street
Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Seargeant Prentiss Dr.
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
I-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave.
Pascagoula, MS 39567

Greenwood Leflore Hospital
1401 River Rd.
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Baptist Memorial Hospital of North Mississippi
Highway 7, South
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr.
Jackson, MS 39216

Delta Medical Center
1400 E. Union
Greenville, MS 39704

Methodist Hospital
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References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

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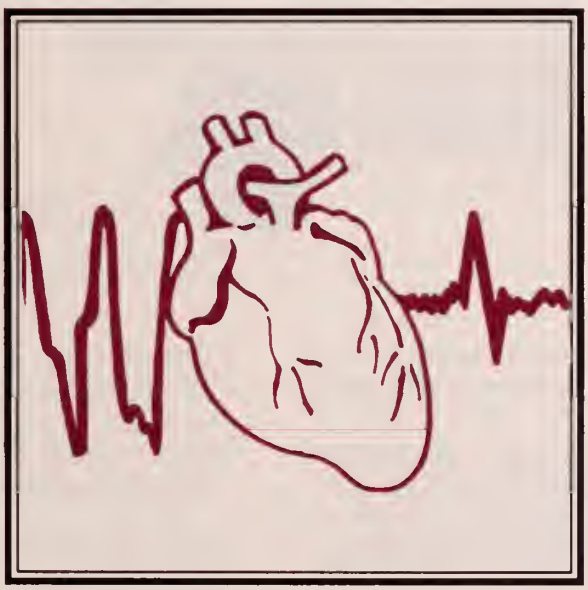
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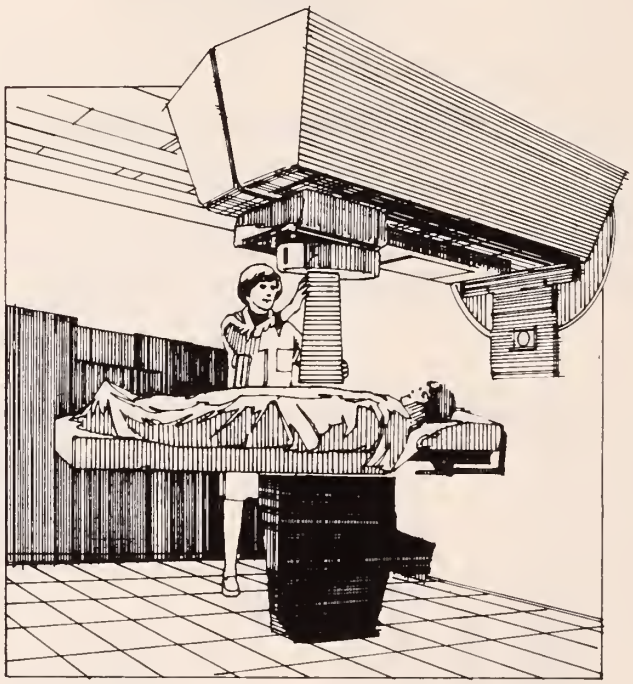
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VASOTEC®

(ENALAPRIL MALEATE | MSD)

VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC® (Enalapril Maleate, MSO) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary

Neutropenia/Agranulocytosis. Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered

Precautions: *General. Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy In such patients, renal function should be monitored during the first few weeks of therapy

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia Elevated serum potassium (>5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials In most cases these were isolated values which resolved despite continued therapy Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC (See *Drug Interactions.*)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release If hypotension occurs and is considered to be due to this mechanism, if can be corrected by volume expansion

Information for Patients:

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician

Hypotension. Patients should be cautioned to report lightheadedness, especially during the first few days of therapy If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician.

Hyperkalemia Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE As with many other drugs, certain advice to patients being treated with enalapril is warranted This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension Patients on Diuretic Therapy. Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release. The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics)

Other Cardiovascular Agents. VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions

Agents Increasing Serum Potassium. VASOTEC attenuates potassium loss caused by thiazide-type diuretics Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy – Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline Enalapril was not teratogenic in rabbits However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women However, data are available that show enalapril crosses the human placenta Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSO) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother

Pediatric Use: Safety and effectiveness in children have not been established

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients

HYPERTENSION The most frequent clinical adverse experiences in controlled trials were headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE The most frequent clinical adverse experiences in both controlled and uncontrolled trials were dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category

Cardiovascular Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), pulmonary embolism and infarction, pulmonary edema, rhythm disturbances, atrial fibrillation, palpitation.

Digestive Ileus, pancreatitis, hepatitis (hepatocellular or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth

Musculoskeletal Muscle cramps

Nervous/Psychiatric Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION)

Respiratory Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, hyperhidrosis

Special Senses Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgias/arthritis, myalgias, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations

Angioedema Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately (See WARNINGS.)

Hypotension. In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia

Creatinine, Blood Urea Nitrogen In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients

Hemoglobin and Hematocrit Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol%, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists In clinical trials, less than 0.1% of patients discontinued therapy due to anemia

Other (Causal Relationship Unknown). In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported A few cases of hemolysis have been reported in patients with G6PD deficiency

Liver Function Tests. Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension.* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day Dosage should be adjusted according to blood pressure response The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS)

Dosage Adjustment in Hypertensive Patients with Renal Impairment The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily

Heart Failure. VASOTEC is indicated as adjunctive therapy with diuretics and digitalis The recommended starting dose is 2.5 mg once or twice daily After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Patients with Heart Failure and Renal Impairment or Hyponatremia. In patients with heart failure who have hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function The maximum daily dose is 40 mg

For more detailed information, consult your MSD Representative or see Prescribing Information, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486 J9VS61R2(819)

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A diminished antihypertensive effect toward the end of the dosing interval can occur in some patients.

For a Brief Summary of Prescribing Information, please see the last page of this advertisement.

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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

MAY 1990

122nd ANNUAL SESSION

May 30th - June 3rd - Jackson, Mississippi



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NEWSLETTER

May 1990

Dear Doctor:

This issue of your Journal includes information about the MSMA's 122nd Annual Session, which gets underway May 30 in Jackson. Register now for golf and tennis tournaments to be held that afternoon at Annandale and the Country Club of Jackson, respectively. Those events are just two of many special activities planned for the week.

> The President's Reception will be held Thursday at the MS Agricultural and Forestry Museum, and promises to be an event the whole family will enjoy. Plans include country music, catered barbeque, and tours of the facility. The family also will enjoy the Saturday night membership party at the Museum of Art/Planetarium complex. A special showing of a space voyage will be featured, along with the opportunity to view the exciting exhibits on display. Your children won't want to miss the "Impressions" gallery. (And you'll be surprised at how much fun adults can have at this unique attraction!)

The MSMA's recent success with legislative proposals reflects diligent work by association and auxiliary members. Some MSMA sponsored/supported bills which passed the legislature are: regulation of utilization review companies, definition of qualifications of medical expert witnesses, establishment of a durable power of attorney mechanism, development of a comprehensive school health curriculum, and requirement for seat belt use.

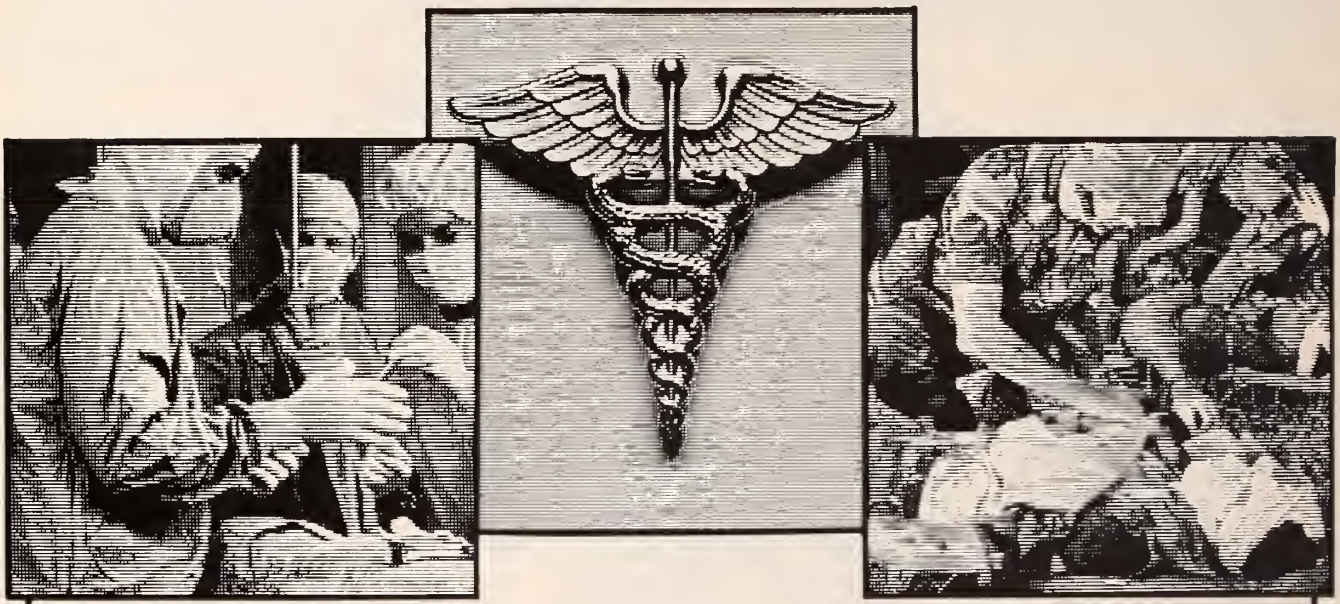
A new service sponsored by MSMA is the AMA's National Physician Credentials Verification Service (AMA/NCVS). The program is designed to simplify the task of verification of physician credentials by hospitals and to enable individual physicians to build a permanent, confidential file of credentials information. For more information about this new service, plan to attend the MSMA's Hospital Medical Staff Section/Young Physicians Section joint meeting during Annual Session, where a speaker from the AMA will describe the program.

Sincerely,

Patsy Twiner

Patsy S. Twiner
Managing Editor

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DATELINE

Crack Cocaine Problem In Rural Mississippi

Jackson, MS - Rural counties in the state are seeking more funds for the battle against crack cocaine. Jefferson Davis County (pop. 14,500) reports a 400% increase in drug patients since 1987, and 60% of patients at a Prentiss public mental health center admit their drug of choice is crack. The drug is linked with an epidemic of syphilis in Washington County, where cases have skyrocketed from 40 in 1988 to 242 this year.

HMO Premiums Increasing Again

Washington, DC - In 1990 HMOs are likely to raise premiums an average of 16%, about the same as 1989, when premiums increased 16.9%. That is the finding of a survey of HMOs conducted by Group Health Association of America. Total enrollment of the surveyed plans is 11.8 million people, more than one-third of the total HMO membership in the U.S. Increases were attributed to hospital rates, pharmaceutical costs, and technology.

Public Prefers Private Health Care Systems

Washington, DC - A new Gallup poll says 83% of the public prefers paying more to have doctors of their choice rather than having a physician assigned to them; 60% would not choose higher taxes to fund a government-controlled health care system, but prefer paying higher costs to private providers. Most (90%) of physicians prefer establishing state agencies to hear medical liability cases, and remove them from the courts.

Plan Would Replace Medicare and Medicaid

Washington, DC - A private/public plan of health insurance for the elderly is proposed by an advisory council on Social Security. The plan would replace Medicare and Medicaid, having the elderly purchase private insurance to cover expenses up to a lifetime limit. The government would subsidize coverage for low-income elderly and also finance coverage for all elderly whose expenses exceed the lifetime limit.

Agreement to Develop Practice Parameters

Chicago, IL - The AMA, nine academic medical centers, and the Rand Corporation have entered into an agreement to develop clinical guidelines for improving medical practice. The AMA, which will serve in an advisory capacity, regards practice parameters a key ingredient in the effort to improve quality of care, eliminate unnecessary services, and expand access to health insurance.



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References

1. *USP DI Update, September/October 1988; p 120.*
2. *Br J Clin Pharmacol 1985;20:710-713.*
3. *Data on file, Lilly Research Laboratories.*
4. *Scand J Gastroenterol 1987;22(suppl 136):61-70.*
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Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

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Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticana (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events was due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to three times the upper limit of normal, however, did not significantly differ from that in placebo patients. Hepatitis and jaundice have been reported. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticana were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Because cross-sensitivity among this class has been observed, H_2-receptor antagonists should not be administered to those with a history of hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
May 1990, Volume XXXI, Number 5

ORIGINAL PAPERS

Radiological Seminar CCXLVI: Percutaneous Abscess Drainage (PAD)

PHILIP E. CRANSTON, M.D.
Jackson, Mississippi

PERCUTANEOUS ABSCESS DRAINAGE (PAD) of abscesses has proven to be an effective, safe form of treatment for abscesses varying widely in both site and etiology. The diagnostic accuracy of ultrasound and computed tomography for abscess detection and for guiding insertion of needles and catheters has paved the way for PAD development. PAD has proven especially effective in patients with frank intra-abdominal abscess formation, a lethal disorder often occurring in older patients during the postoperative period when the risks of re-exploration and general anesthesia are elevated.[1]

Patients and Methods

Recently, in preparation for a discussion on percutaneous abscess drainage, a review of the pertinent literature on PAD was done. A random review of several patients undergoing PAD was done to see if our results at the UMC were in line with results being reported. The paper is the result of the review of the literature and analysis of our experience with ten patients during an active period of PAD. My primary interest and participation in PAD has been for the use of CT body scanning in guidance for PAD. Our radiology special procedures service do any PAD requiring the use of drainage catheters.

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, University Medical Center, Jackson, MS.

Results

The data is shown in Table 1. Patients were evaluated for coexisting medical problems and/or complication, number of drainages, postoperative status (previous surgery), PAD complication, overall success, and whether additional surgery after PAD was necessary. Results are shown in Table 2.

Discussion

The indications for PAD are expanding, but the usual is a detected unilocular discrete abscess collection with a safe access route available, ie, extraperitoneal route. With continued experience and success, these can be expanded to include an abscess of any size, shape, or consistency where a safe route is available. The absolute contraindications include abscess patients with no safe approach route, uncorrected coagulopathy, and lack of proper equipment or experience. Multiple abscesses, micro-abscesses (cellulitis), and infected tumors are relative contraindications.

The sequence for PAD is as follows in order: abscess detection, guidance system selection, access route determination, diagnostic aspiration, choosing drainage catheter assembly, catheter insertion, abscess evacuation, follow-up imaging, and catheter withdrawal.

CT has proven to be the modality of choice for abscess detection and allows for very accurate

placement of needle and catheter (see Figure 1). Ultrasound can provide a low cost and quick method for detection and treatment, but relationships are difficult to assess at times. Fluoroscopy allows placement of wires and catheters under continuous direct vision, visualization of the abscess cavity from front and lateral views, identification of fistulae, assessment of the pleural space relationships quickly, monitoring of catheter side holes, and provides a baseline "abscessogram" for follow-up. Many times CT and fluoroscopy should be combined for ideal catheter placement.

Access route planning should be done with careful examination of the diagnostic CT scan. Vital structures, ie, bowel and vessels; sterile spaces; and/or fluid collections should be avoided. An extraperitoneal route should be used, if possible, with a short, straight route and dependent drainage. A fairly straightforward, relatively simple example of PAD is shown in Figure 2.

The initial diagnostic aspiration will indicate abscess by appearance, odor, and/or gram stain. The appropriate drainage catheter assembly then can be selected based on the appearance and location of the abscess. If the abscess is superficial, a trocar type of system might suffice; and if the abscess material is viscious, a large bore catheter may be needed. The Seldinger technique involves the use of a guide wire and dilators similar to the system used with angiography. With the trocar technique, basically a large needle with a catheter sheath is inserted without the use of guide wires and dilators.

Following the evacuation of the abscess cavity and irrigation, the catheter is left in place for gravity drainage, and daily irrigation can be done. For smaller abscesses, the catheter can be left in for a week and for larger abscesses and/or fistulous communication, the catheter can be left in for an extended time (usually 7 to 21 days). Follow-up imaging is important and success can be judged by the scans. Additional drains may prove to be or not to be necessary.

Complications can be expected in up to 15% of the cases. Major complications include sepsis, hem-

TABLE 2

PAD RESULTS

10/10 Patients Success by Imaging	100%
1/10 Patients Complication (hemorrhage, fistula)	10%
10/10 Patients Post-Op before PAD	100%
TOTAL ABSCESSES DRAINED	19
Complications 2/19 Abscesses	15%

TABLE 1

PATIENT DATA

	# of Drainages	*Post-op*	*Complications*	*Success*	*Additional Surgery*
1. H.S. (Lupus)	1	yes (appendectomy)	none	yes	no
2. R.S.	1	yes (perforated appendix)	none	yes	no
3. P.M.	1	yes (colon cancer)	none	yes	no
4. E.S.	2	yes (G.S.W.)	none	yes	no
5. E.T. (lymphoma)	2	yes (splenectomy)	none	yes	no
6. S.M. (poly-arteritis)	1	yes (appendectomy)	none	yes	no
7. J.B. (AARDS, renal & hepatic failure	5	yes (diverticular abscess with massive contamination)	yes × 2 (bleeding, fistula)	yes (CT)	yes multiple (expired)
8. J.S. (G.S.W., renal failure)	3	yes (perforated ulcer × 2	none	yes (CT)	yes (expired)
9. C.T. (stab wound)	1	yes (chest tube)	none	yes	no
10. G.S. (empyema)	2	yes (chest tube)	none	yes	no



Figure 1A. Large arrowhead points to small metastatic tumor focus dorsal to IVC (indicated by small arrowhead).

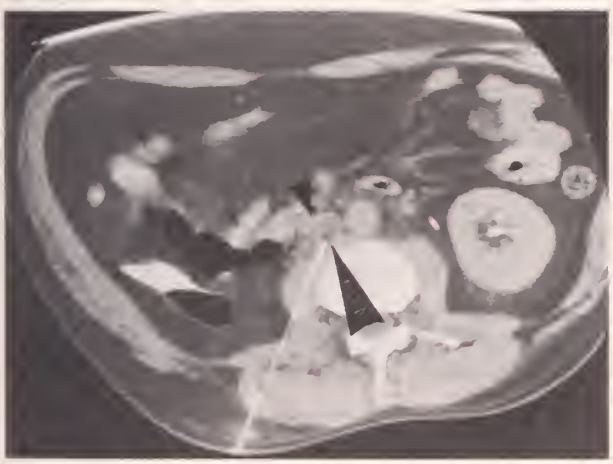


Figure 1B. Skinny needle is inserted deep behind IVC for positive biopsy. This demonstrates the extremely accurate placement of needles under CT guidance.

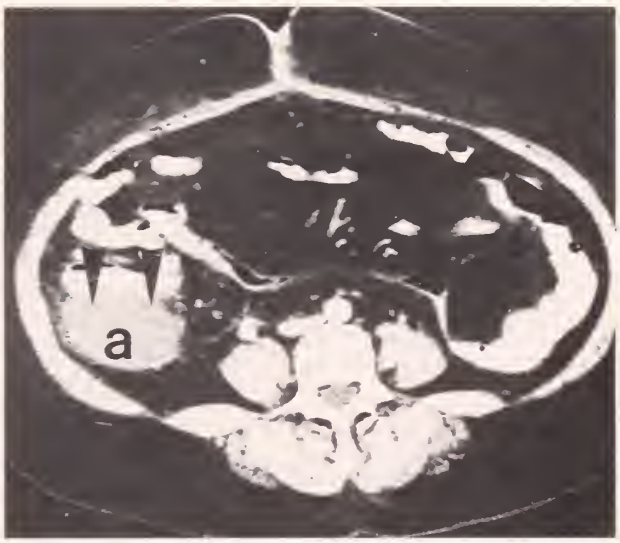


Figure 2A. Abscess at tip of caecum indicated by arrowheads and labelled "A."



Figure 2B. Patient prone with needle placed into abscess (arrowhead). Needle tip pointed to by arrow.

orrhage, and bowel perforation. Minor complications include pneumothorax, skin infection, and pain.

Response and success can be stated in various ways. A radiographic response would be diminished cavity size, a catheter response would be decreased drainage, and a clinical response would mean decreased pain, fever, and leukocytosis.[1]

VanSonnenberg, et al indicated in their initial series that surgery was avoided in 83% of 250 patients. They had partial success but eventual surgery in another 7.8% of their patients. Their total success was considered to be in the 90% range. They had a 10% complication rate (2.8% major).[2] A more recent series by vanSonnenberg reporting the results of percutaneous diagnostic and therapeutic interventional radiologic procedures in children reflected similar results. Diagnoses were accurate in 96% of the cases, and therapeutic procedures were successful in 84% of patients. Complications occurred in 6%. More specifically, in the children with abscesses 12 or 15 (80%) were treated successfully and the complications were hemoptysis in one patient and hematoma in another 2/15 (13%).[3]

Conclusion

Our results showed that our experience parallels that of the reported data. Eighty percent of our pa-

tients survived their abscess problem. We had 100% successful abscess drainage determined by imaging. Ten percent (or one patient) had two complications, ie, hemorrhage and entero-cutaneous fistula formation (See Figure 3). The total number of abscesses drained in these patients were 19 (some patients had multiple abscesses). Complications occurred in 15% of the total number of abscesses (19). We did not act as primary physician in any of these cases. All patients were postoperative at the time of PAD.

All of our patients had a complicating medical condition or were in a complication stage from previous surgery or trauma. These included patients



Figure 2C. Arrowhead indicates needle in abscess. Arrow points to wire inserted into abscess for catheter placement.



Figure 2D. Abscess has been drained and contrast medium introduced into cavity. Catheter in place obscured by density of contrast medium (c).



Figure 3A. Lesser sac abscess indicated by arrowheads. Anteriorly introduced needle pointed to by arrow.

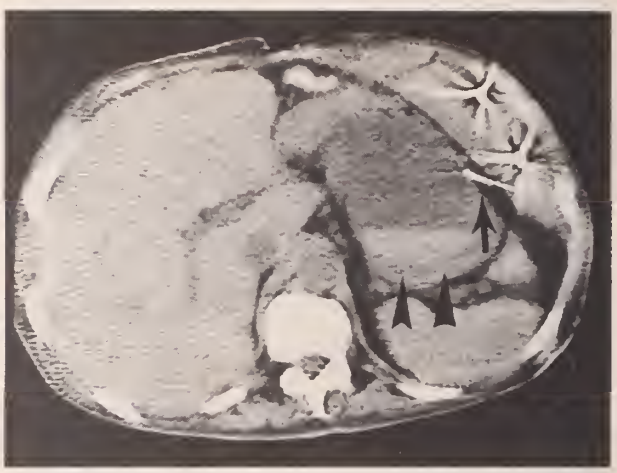


Figure 3B. Arrows show hemorrhage at dependent aspect of abscess cavity which occurred with initial anterior approach (Figure 3A). Abscess was alternatively drained from a lateral approach. Arrow shows needle in place.

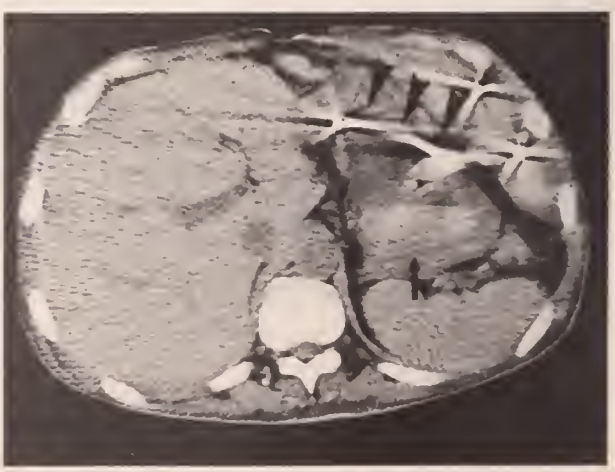


Figure 3C. Catheter in place pointed to by arrowheads from lateral approach. Arrow indicates previous hemorrhage which stabilized.

with Lupus Erythematosus, post-appendectomy, a perforated appendix, a colon cancer, a gunshot wound, a lymphoma post-splenectomy, a polyarteritis post-appendectomy, a diverticular abscess with massive peritoneal contamination and ARDS with renal/hepatic failure, a gunshot wound with renal failure and perforated ulcer (times two), a stab wound, and an empyema.

In summary, a limited review of our cases at UMC indicates that our experience is similar to that in the literature in terms of results. All our patients reviewed had noticeable complicating co-existing disease and/or postoperative complications. All our patients were postoperative from some primary surgical intervention.

From looking at our and others' data, we conclude that PAD supplements antibiotics and surgery as an additional mode of therapy for abscesses. It is particularly useful in the postop, elderly, or other compromised abscess patient who needs the decreased morbidity possible with PAD. The surgeon and radiologist should work closely together for selection of the patients for PAD. PAD should not be performed in patients with an unknown, possibly complicated clinical setting where direct visualization is felt mandatory by the attending clinician. The radiologist will be heavily dependent upon the surgeon to correct any complication which might occur with PAD, and the surgeon's clinician expertise will be needed for ideal patient care in the post drainage tube insertion period. ★★★

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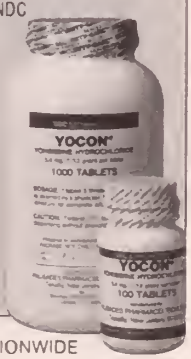
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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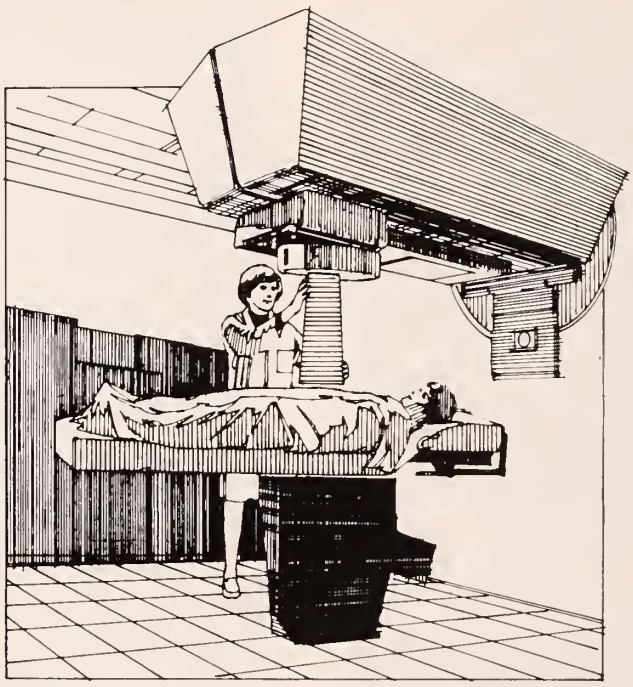


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SPECIAL ARTICLE

Science Education and Societal Values

WILLIAM R. HENDEE, PH.D.
Chicago, Illinois

In January 1988, the American Medical Association hosted a meeting in Palm Springs, CA for chief executives of selected pharmaceutical and medical instrumentation industries, leading medical researchers, writers and educators, government officials, and other persons knowledgeable about medical research. The purpose of the meeting was to identify emerging barriers to continued productivity of the biomedical research enterprise, and to explore ways to eliminate or at least reduce these barriers. The participants noted several concerns, ranging from inadequate research funding to conflicts of interest associated with increased support of academic research and medical education by industry. But one worry was paramount in the minds of most of the attendees. That concern was the lack of interest of young people in science and mathematics, and the diminishing performance of U.S. students in standardized examinations compared with young people of similar ages from other countries.

Participants at the meeting were worried about the likely diminution in the supply of talented and dedicated scientists essential to maintenance of a highly productive research effort in this country. But they expressed an even greater concern that reflected their realization that the decreased interest in science and mathematics is in part a manifestation of a growing disinterest of many young people in committing to a rigorous education in general. The mood of the meeting reflected the sentiment expressed in the 1983 Carnegie Commission report *A Nation at Risk:* "If an unfriendly power had attempted to impose on America the mediocre educational performance that exists today, we might have viewed it as an act of war."

Several different reports document the relatively poor performance of U.S. students in science and mathematics. In a recent compilation of scores on international achievement tests given to 12th grade students from 13 countries, for example, U.S. students placed:

- 9th in physics (Canada, Finland, Italy and Sweden fared worse)
- 11th in chemistry (Canada and Finland fared worse)
- 12th in geometry (only Thailand fared worse)
- 12th in algebra (only Thailand fared worse)
- 13th in biology (U.S. students finished last)
- 13th in calculus (tied with Hungary and Thailand for last place)

The poor performance of U.S. students can be explained in part by the decreased time and effort devoted to science and mathematics education in U.S. schools compared with those of other countries. For example, in the United States:

- Less than 15% of high school graduates have taken a single course in advanced mathematics.
- Students spend ⅓-½ as much time in science and mathematics as do students in the Soviet Union, Japan, the People's Republic of China, the German Democratic Republic, and the Federal Republic of Germany.

Dr. Hendee is Vice President for Science and Technology, American Medical Association.
This article is condensed from a Centennial Series presentation at Millsaps College in Jackson, MS, February 9, 1990.

- Only 15% of high school graduates have taken physics, only 30% chemistry, and only 35% algebra.

Interest and academic performance of students are closely linked, as evidenced by the plans of college freshmen for majors in different fields. From 1981 to 1987 the percentage of entering college students interested in different disciplines changed as follows:

- Engineering decreased from almost 13% to less than 10%.
- Computer science dropped from 5% to 2%.
- The physical sciences continued their decline from 2% to slightly more than 1%.
- The biological sciences remained constant at about 4%.
- Mathematics remained at less than 1%.
- The social sciences increased from 6% to almost 10%.
- Education increased from 6% to almost 10%.
- Business increased from 24% to 29%.

Several social critics have expressed alarm at the falling stature of U.S. students in international achievement tests. They call for major reforms in, and increased accountability of, the public educational process. Educators emphasize the need for additional funds and resources to accomplish the reforms that they agree are needed. And government officials point out that this country's public education budget is currently about $360 billion, and that this sum represents an expenditure per student considerably above that in other countries where students perform better. What these officials do not say is that the U.S. expenditure per student is averaged over students in higher education as well as elementary and secondary school. When only the lower (pre-primary, primary and secondary) educational levels are considered, the United States is tied with Italy for 12th place in educational expenditures per student. Higher expenditures occur in Sweden, Switzerland, Norway, Belgium, Denmark, Japan, West Germany, France, the Netherlands, and Great Britain.

But money is not the sole, or probably even the most important, issue associated with the educational problems facing our society. These problems evolve from a deeper, more fundamental conflict between the values consistent with a devotion to rigorous education, and those that are reflected in the media, the entertainment and sports industries, and indeed by the interests and lifestyles of most adults, especially those judged to be successful. A commitment to rigorous education and an intellectual life is unattractive to young people in a society where these virtues are not cherished but instead often are ignored and even ridiculed. The values of young people in a society are essentially a mirror of the values cherished by the society at large. If we as adults are concerned about the values we see reflected in the mirror, it is hardly fair to blame those who hold it for us to look into.

For over 20 years investigators at the University of California at Los Angeles have interviewed several thousand college freshmen in an effort to profile young people's interest and concerns and to identify changes in this profile from year to year. Some of the questions are concerned with "life values." In 1967 slightly more than 40% of the freshmen identified "to be well off financially" as an important life goal. By 1987 this percentage had increased to 80%. In 1967 "to develop a meaningful philosophy of life" was identified as an important life goal by over 80% of college freshmen. By 1987 this percentage had decreased to 40%. It is highly unlikely that such a dramatic shift in values represents a change in the fundamental character of young people. In all probability this shift reflects a reorientation of the values of society over this 20-year period, and that young people are simply mirroring this reorientation.

Recently the book *American Renaissance* by M. Cetron and O. Davies (St. Martin's Press, New York) published a compilation of "new" versus "old" values in U.S. society. This compilation extracted from an article published by Plummer in "The Futurist," January-February, 1989, is reproduced below. It expresses several major differences between "Synthesizer" values of today's youth compared with the values of the traditionalist generation reared in the 1950's and early 1960's. In our country the educational process is administered and governed by persons whose social ethic is strongly influenced by the values of the traditionalist generation. But the children who are nurtured (or not, as the case may be) by the educational process are products of a different (Synthesizer) era. This dichotomy between the values of adults and those of children is not a new phenomenon; but the magnitude of the difference may be more dramatic today than ever before. If our nation's educational process does not adjust to and accommodate this difference, it runs the risk of becoming increasingly irrelevant to the needs and interests of young people.

"New" vs "Old" Values in U.S. Society

Traditionalist Values	*Synthesizer Values*
Self-denial ethic	Self-fulfillment ethic
Higher standard of living	Better quality of living
Traditional sex roles	Blurring of sex roles
Accepted definition of success	Individual definition of success
Traditional family life	Alternative family life
Faith in industry, institutions	Self-reliance
Live to work	Work to live
Hero worship	Love of ideas
Expansionism	Pluralism
Patriotism	Less nationalistic outlook
Unparalleled growth	Growing sense of limits
Industrial growth	Information/services outlook
Receptivity to technology	Technology orientation

Reformation of the educational process to the extent required to address the needs and interests of young people as well as those of society is certainly not a minor challenge. In our nation this problem is magnified by the dissemination of educational authority and responsibility so that decisions and changes must be implemented at the community, rather than the state or national, level. But that also makes the challenge accessible through grass-roots efforts led by community leaders who value education and recognize its life-long importance.

Every community potentially has educational lay-leaders, because every educated person has the prerequisites to become one. Among those with this potential are physicians, scientists, engineers, and educators themselves. They can exert a powerful influence in improving the educational process in their communities and bringing it into alignment with the needs, interests and desires of young people. In considering this obligation, perhaps we should keep in mind a statement by Benjamin Disraeli: "The youth of a nation are the trustees of posterity." ★★★

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The State of the Union: The AMA Works

Alan R. Nelson, M.D.

I BELIEVE that my remarks as your president should inform you about the state of the union — the Federation of Medicine — the AMA.

I hear it said as I travel around the country that our profession is on a road to change. It is important to remember that we have always been on a road to change. We were on the road to change when we approved the Flexner report and drove out the diploma mills a century ago. We were on the road to change when we built community hospitals all over the country after World War II using government money authorized by Hill-Burton. We were on the road to change when the Health Planning and Resource Development Act was passed. And surely we were on the road to change when we warned the American people of the restrictions HSA would put on the availability of medical services and facilities, and the people said they would not accept that change and the bureaucracy HSA would impose.

We are used to change. The AMA functions in a configuration that permits us to adapt to change and to guide change. That is the nature of our organization, with its policy planning and strategic management capabilities.

So we are not intimidated by the prospect of confronting new challenges. And while we expect change, we do not expect to lose the fundamental values traditional to our profession. Just as we will not give up the pluralism and free choice that has made our health care system what it is at its very best.

The times are not easy for us. Society distrusts institutions, and the professions are not above attack. Medicine, law, the clergy — the historic learned professions are targets of criticism reminiscent of the days of Hogarth. I have joked that if you think things are hard for physicians, how would you like to be a TV evangelist?

". . . The AMA functions in a configuration that permits us to adapt to change and to guide change . . . So we are not intimidated by the prospect of confronting new challenges. And while we expect change, we do not expect to lose the fundamental values traditional to our profession."

But doctor-bashing is not a laughing matter, and we must consciously and with great intensity work to maintain the confidence of the public in medicine as an institution, and in the AMA as its lead organization. This cannot be done easily, or by edict, or by emanations from a central headquarters. Preserving trust in medicine depends on deeds as well as words and, it is a task that must build a message from the grassroots, as well as from Chicago or Washington.

The need for us to counter the anti-medicine currents — whether they come from the media or from business or local government or national political power bases — has never been greater, not even in 1964. The process by which we must accomplish this begins right here, right now, and with an examination of what is RIGHT with the AMA.

The Speaker of our AMA House of Delegates and I were invited to visit with caucuses in Pennsylvania during their October meeting where their brilliant and united state society leadership successfully carried the unification issue to their House of Delegates for ratification and bylaws change. We were asked the same question there that each of you is asked regularly — particularly those of you who have earned blazers because of your dedication to member recruitment. The question: What does the AMA do for me?

It is this question I want to address today.

Let us, then, look only briefly at the environment of medicine, because that is a subject which the other AMA officers and I have discussed with many of you in your states, and which we will continue

Dr. Nelson is president of the AMA. Presented at the Interim Meeting, American Medical Association, Sunday, December 3, 1989 in Honolulu, Hawaii.

to discuss as we visit more of you over the coming six months. And it is a subject where we will tell it as we see it, and we will listen carefully to what you tell us.

For this report, suffice it to say that medicine is very much affected by our information-driven society; by a budget-driven government policy; by the potential for fragmentation over the changes in physician payment; by the threat of conversion of our profession into a public utility; and by increased frustration due to loss of professional freedom and the imposition of the terror of the courts. So my state of the union message today is a report on what the AMA is doing for every physician and patient in America, not a report on what others are trying to do to us.

"Preserving trust in medicine depends on deeds as well as words, and it is a task that must build a message from the grassroots, as well as from Chicago or Washington."

Neither do I wish to cite a litany of AMA accomplishments about which you are already well informed — as important as they are — because they are in the handbook as part of your business, or because they are a part of a proud but familiar record.

Therefore, I will not tell you in detail how we have defeated mandatory assignment four times in the past three Congresses. But it is important for our membership to know we have done this for them. And tell our members that we beat Pete Stark and ETs in the budget bill, after they said we were beaten.

Nor do I wish to tell you all that goes into making AMA the world's largest publisher of scientific information, or the largest source of physician demographic information — so much so that when the government wants this kind of information, it often comes to us. At least, we know our members are accurate.

Nor will I dwell on the fact that our members receive three dollars worth of services for each dollar because dues income accounts for only thirty-eight percent of our revenue. That is important information, but you know it already.

Instead, in the time allotted to my Interim Report, I want to focus on some of the less well-known projects and activities of the AMA. Some of it is the work of outstanding people whose valuable work doesn't get noticed very often. Some of it represents innovation and preparation for the future. And some of it is simply the glue that binds us into an organization that, if it did not exist, we would have to create.

Did you know that our White Paper on the use of animals in research is the definitive work on the subject, and that we have received thanks and high praise from NIH and the academic community for taking a courageous lead in this area? Tell your basic science colleagues about that, and maybe more MD-PhD's will join AMA. Tell them, too, that our consistent support for NIH funding and efforts to protect the NIH agenda from political pressure is an important AMA contribution to the stability and integrity of medical research in the U.S.

Did you know that in this year alone we have held flagship conferences on adolescent health, animals in research, injuries and accidents in American society, family violence, who pays for medical education, and the future implications the Human Genome Project has for the practice of medicine? The national movers and shakers attended these conferences and recognized the contributions of AMA, even though our average member might not have even noticed the ads and announcements that heralded these events. Sometimes our light burns just as brightly even if it is underneath a bushel.

Did you know the AMA is the leader of the world medical community? Not only do we publish *JAMA* in thirteen languages, but we lead the world, through the World Medical Association, in developing statements of ethics, guidance in the use of technology, manpower issues, medical education standards and quality assurance. The world is now small, and our global leadership responsibility to our profession is important. For instance, did you know we helped organize the Thai Medical Association in a program for infant survival, and that we presented that program to the director of the World Health Organization, as well as the World Medical Association?

Of course, our number one mission is representation. I said two years ago in a speech at our leadership conference that in order to represent medicine, we must be organized into an AMA that is strong, that is united, that is a triple threat in response to government intervention, that is willing to take risk, and that is capable of rapid response. To represent all of medicine, we must exert both strength and stability in finance, in membership, in our staff capability, and in our ability to communicate the fact that we have the greatest health care system in the world — and that the public will lose if we convert it into a public utility.

On the communications front, did you know that

our Division of Communications answers over one thousand requests for information and interviews — each month? That three thousand reporters receive our packet of news releases every week? That we hold meetings with editorial boards of daily newspapers regularly, adding up to some fifty-five this year? That AMA spokespeople make hundreds of national and local appearances on electronic media each year? That American Medical Radio News is used by five hundred fifty radio stations daily and is broadcast on the Voice of America in Europe? That in 1989, AMA's consumer film "First Comes Caring" had twenty-nine hundred telecasts to an audience of over twenty-one million people? Or that American Medical Television reaches over fifty thousand physicians and eight hundred thousand lay people each month on the Discovery Channel, and that it will become an increasingly important tool to get out our message in the media decade ahead?

Did you know that we hold conferences for science reporters and seminars for physician media communicators each year, so that our message can be communicated by a network system at the local level?

Is all we are doing enough? Of course not.

Must we do more? Certainly.

What is the best way? To network with the communications capability of hundreds of state and county societies.

I said that the AMA must be triple-threat in coping with government actions where the rights of our members and our patients are at stake. That means that first, we confront these challenges in the halls of Congress. If that fails, we meet them in the offices of bureaucracy. And if we lose there, we take them on in the courts. For instance, we have filed fifteen *amicus* briefs in the Supreme Court in the last five years — on such varied issues as AIDS, antitrust, alcoholism, withdrawal of life supports, tort reform, and procedural rights in HHS reimbursement regulations. We are also active at all other levels of the judiciary.

Sometimes we win. Sometimes we lose. But we always get their attention — as when we challenged the government attorneys in Texas during the Christmas holidays over the MAAC provisions, and we did complicate their holidays!

And in a very different legal matter, AMA's Office of General Counsel is examining legislation that would extend the labor exemption from antitrust laws to physicians facing a payer with market power. The AMA recognizes that the current state of the law is intolerable. Recent cases have proved that the courts permit payers to exercise market power against physicians with impunity. What AMA will not do, as some physician unions apparently have, is recommend that physicians respond to the inequity of their present situation by ignoring the law and subjecting themselves to the prospect of criminal penalties. But since this unfair exploitation of the market is intolerable, we will put high priority on achieving parity under the law.

"My note of caution comes from a concern that the frustration and disillusionment being expressed by physicians in America will lead them to throw up their hands in despair rather than raise up their arms in support. We need . . . involvement if medicine is to successfully confront the challenges of the decade ahead."

Moving from the courts to our work to influence legislators, we have learned that we must take risks when the stakes are high and when going with the flow means that we would lose. Our ads against ET's were described to me by the acting director of HCFA as the worst mistake the AMA ever made. And Governor Sununu asked me if they were "my" bright idea. Why were they so upset? Because they thought they had it locked up, and our ads focused attention with so much heat from the Federation that they saw that we would ultimately win this — as we have.

What about representation to our other publics? Many of us officers have addressed major business groups in Seattle, New Orleans, Boston, Detroit, and we are planning visits to other major cities, to highlight our plan to strengthen the U.S. health care system rather than to adopt a foreign model.

And we are constantly seeking ways to coordinate better our legislative activities with national specialty societies. We hold regular briefing sessions for information exchange and tactical planning. Our Washington staff was named by Congressional staffs as one of the five most effective Washington lobbies. They achieved this ranking because our people are experienced, knowledgeable, tough and professional. Just look at what they have accomplished with RBRVS. And when the Federation puts on a full-court press, as it did on ETs, it is wondrous to behold. We had a magnificent win on physician payment last month, and we can all be proud of it.

We work at establishing the best possible relations with organized consumer groups. For instance, we have frequent staff-to-staff meetings with AARP to identify areas of joint cooperation. We have lob-

bied with them against unreasonable Medicare cuts. And we held a joint conference on quality of care for the elderly.

We also keep the lines of communication open with other professions. As an example, I have carried our preliminary discussions with the president of the American Bar Association, Mr. Stanley Chauvin, with respect to a joint AMA-ABA project to put together teams of a doctor and an attorney to go into local schools and present a program on the medical and legal aspects of drug use. This great idea is Stan's, and originated with his concern about how little risk-taking teenagers understand the lifelong impact of a felony conviction, and how they underestimate the medical consequences of drug use. We are jointly developing talking points and handouts, and Stan and I will pilot the lawyer-doctor drug prevention team teaching in Salt Lake City in January, with a program that will be replicable for use all around the U.S. In the months ahead, I ask each of you to work with your local bar association to implement this important and needed effort.

Another area where the law and medicine often meet is ethics. As our science becomes more complex, as society insists on being more engaged in medical decisions that affect it, as entrepreneurial trends force questions never before asked, AMA's responsibility as the source of ethical guidance becomes even more important. Our Council on Ethical and Judicial Affairs will be on top of the issues, with studies and opinions relating to financial incentives to limit care; ethical implications for HMOs and IPAs; racial and gender disparities in receipt of medical care; prenatal screening for genetic defects, just to name a few.

These, then, are some answers to the question so many of you are asked so often: What does the AMA do for me?

What do I have to report to you about the *future* state of our union, our AMA?

I am cautiously optimistic — optimistic because the current leadership and staff of the Association is so capable. I am impressed, for instance, with the excellence of the Council and Board reports, the directions the AMA is taking in reaching out to the formation of coalitions, and joint activities with specialty societies and other organizations. We are able to leverage our strength when we do so. We must and will optimize these opportunities.

My note of caution comes from a concern that the frustration and disillusionment being expressed by physicians in America will lead them to throw up their hands in despair rather than raise up their arms in support. We must have membership to succeed. And to get and keep members, we must tell America's physicians how well AMA functions, and all that it is doing for them. We must tell them that we need their involvement if medicine is to successfully confront the challenges of the decade ahead.

To the uninvolved, I say: join us with confidence, and not out of desperation.

To our critics, I say: we welcome your ideas; we are always open to better ways of doing things. But give the AMA credit for what is right when you criticize the AMA for what is wrong.

To nonmembers, I say: your future is at stake. AMA membership is your best investment in that future.

To our superb staff at all of its many levels, I say: thank you — we know of your loyalty and the excellence of your work.

To you, the leaders of American medicine, I say two things: First, thanks for the extraordinary personal kindness you extend to Gwen and me and for your letters, and your input, and your help. Second, I say: lift up your heads, be proud. You are the lynchpin of the work of the AMA.

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Planting Time Again

It was a year ago, about this time, during planting season in the Mississippi Delta that I wrote my first address to the Mississippi State Medical Association. That same time of planting has arrived again and now I am dictating my last President's message to the Association through its Journal. To most of the people in this part of the state, this is an exciting time of the year. A time of getting back to work, a time of new beginnings and new crops, and a time when employment levels go up. However, for me it is a time of relative sadness as I think back over a year that seems only like a few days; yet was packed with constant activity. Yes, I will miss the daily conversations with our executive director and his capable staff. Incidentally, it is this very same staff that is responsible for any positive accomplishments that were made this year.

We planted seeds a year ago that would foster an improvement in the physician's image in our state. We also planted seeds that we hope will grow into a final product which will be an ongoing comprehensive school health education program for Mississippi. In contrast to the yearly planting seasons of annual crops, we planted seed that will bear perennial fruit. I hope that we as a medical association will continue to nurture, cultivate and, when necessary, prune these crops to fit Mississippi's societal needs and to fit the needs of us as a medical association.

May 31 through June 3, you have an opportunity to sow your ideas about improvement of health and welfare in Mississippi and your ideas concerning improvement of the delivery of medical care and your Medical Association. Our annual meeting will be held during those dates. It should be felt as a personal responsibility of yours to make an appearance and impact at that meeting. Our House of Delegates and Reference Committees offer a perfect forum for your ideas and concerns. Our Reference Committee structure allows all members to have an unrestricted chance to express your views about our programs or your suggestions concerning our structure and function as a State Medical Association.

Our annual meeting this year will also give you an opportunity to have solid social interactions with your colleagues and their families. We have planned a

(Continued on page 169)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION
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MAY 1990

The Compleat *Newsletter*

For many years now we have all enjoyed that newsy part of our state medical journal, the *Newsletter*. That's the one that has all the pearls of information on everything under the sun that affects our medical lives. Whoever could possibly have the time to glean those tidbits of information from the literature and come up with the *Newsletter* month in-month out, year after year? It is none other than our own illustrious managing editor, Mrs. Patsy Silver Twiner.

She has really done a beautiful job not only with the *Newsletter*, but with the state medical journal itself. It is recognized as one of the best medical journals published these days. With deft hands each month she gets all the advertising; gets the articles approved and laid out, ready for printing; nudges us for editorials; and gets it all to the printer in time to get it to our subscribers and members at its proper time.

Mrs. Twiner is that friendly, efficient, well-organized individual who not only does the journal, but also a myriad of other chores at our MSMA offices. Most of you only see her taking pictures at our annual meetings, but this is only a miniscule part of her work. We members of MSMA often overlook those around us who do the most for us. I, therefore, would like this bouquet of roses to go to Mrs. Twiner and a big round of applause for her from all of you is in order. This brings me to the unpleasant task of admitting to myself (and to you) that Miss Patsy is leaving MSMA as she has made some changes in her life that necessitate a change of location.

It is with deep regret that we see her go, although we know she must. Our prayers will be with her in her new endeavors and we know that she has made a great impact on us and on medicine in Mississippi. Thanks to you for all you have done for all of us, Miss Patsy.

Thank God that as a physician I get to be around such nice people as we have working for our Mississippi State Medical Association.

JOE JOHNSTON, M.D.
Associate Editor

THE PRESIDENT'S PAGE

(Continued from page 168)

family oriented President's Reception on Thursday evening at the Agricultural and Forestry Museum. Our Saturday night party will be held at Jackson's Art Museum and Planetarium. The Auxiliary has planned an outstanding program for your spouse also. Individual members of the Central Medical Society Auxiliary have planned an enjoyable time in Jackson.

I am soliciting your attendance, support and involvement in your Medical Association for the sake of yourselves, your families, your colleagues and most importantly, your patients. Please show up and bring some fresh seeds of your own to sow, or if you wish, some old root-stock would be acceptable. Sometimes old root-stock may grow the best final product.

I want to take this opportunity to thank all of you on behalf of Jean and myself for your hospitality as we traveled to the component medical societies throughout the state. On our visits from Tupelo to Biloxi and from Meridian to Vicksburg, we were treated with exceptional kindness and respect and with a warmness that only Mississippians know how to provide.

MSMA Membership Benefits

Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrative here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

HEALTH INSURANCE

MSMA members who are organized as PAs and wish to provide health insurance coverage for their employees are eligible to participate in a self-insured 501(c) (9) trust sponsored and administered by a subsidiary of the association. All MSMA members are also eligible to apply for health insurance programs offered by the American Medical Association. For further information contact Jackye Wiebelt at MSMA Diversified Services, Inc.

MEDICAL MALPRACTICE INSURANCE

The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

DISABILITY INCOME INSURANCE

Based on careful evaluation of the market and periodic reevaluation, MSMA endorses a disability income insurance program. MSMA members receive a discount and are assured of coverage by a reputable national company with a track record of writing coverage for professionals. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

LIFE INSURANCE

MSMA members by virtue of their membership in the AMA are eligible for a variety of life insurance programs sponsored by the AMA. Because of their size these programs can be offered at low cost group rates. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

MEDICAL SUPPLIES

MSMA members are eligible to participate in a group purchasing program for medical supplies. Professional Group Services offers a wide range of quality, low-cost equipment and supplies for the physician's office. For further information call Davis Richards at MSMA.

FINANCIAL/RETIREMENT PLANNING

MSMA members by virtue of their membership in the AMA are eligible to participate in AMA Investment Advisors, Inc. This wholly owned investment subsidiary of the AMA offers a wide range of investment opportunities tailored specifically for physicians. For further information call Davis Richards at MSMA.

PRACTICE MANAGEMENT

Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics from CPT-IV coding to patient surveys. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

DEBT COLLECTION SERVICE

Based upon sponsorship by medical associations in many states, IC System is endorsed by MSMA to perform debt collection services for offices and clinics of member physicians. IC System has a proven national track record as a debt collection service. For further information call Davis Richards at MSMA.

TRAVEL PROGRAMS

Each year MSMA selects several outstanding travel opportunities provided by INTRAV, a highly respected travel organization specializing in group travel arrangements. INTRAV's "frequent traveler" program attests to the satisfaction of its clients. For further information call Kay Gatewood at MSMA.

Information Sources

MSMA and MSMA Diversified Services — 735 Riverside Drive, Jackson, MS 39202; 601-354-5433 or 800-898-0251 (In-State Watts)

Medical Assurance Company of MS — 735 Riverside Drive, Jackson, MS, 39202; 601-353-2000 or 800-325-4172 (In-State Watts)

MEDICAL ORGANIZATION

122nd Annual Session Coliseum Ramada Inn Jackson, Mississippi

For the first time in more than a dozen years, the MSMA's Annual Session will be held in Jackson. Although the host hotel is the Coliseum Ramada Inn, several popular Jackson landmarks and attractions will serve as location for events in this year's family-oriented program.

Mississippi's Agricultural and Forestry Museum on Lakeland Drive is the site for the annual President's Reception, set for Thursday, May 31. The evening features country music, catered barbeque, and tours of the museum. Other attractions at the complex will provide entertainment for the whole family. There is a working farm, a cotton gin, a reconstructed old town complete with general store, church and a country doctor's office.

Jackson's Art Museum and Planetarium will serve as the location for the annual MSMA/MSMA Auxiliary membership party on Saturday night. The cocktail buffet will have a "Mississippi Delta" theme in honor of President and Mrs. Ed Hill of Hollandale. One of the art museum's biggest attractions is the "Impressions" gallery, where children (and adults, too) are encouraged to experience art forms, rather than just view them. The whole family will find this attraction to be most entertaining. Highlighting the evening will be a live auction to benefit the AMA-ERF. Art objects and other collectibles have been gathered from across the state and will be auctioned during the evening. There will also be an opportunity to view a showing of a space exploration voyage at the Planetarium.

Annandale Country Club and the Country Club of Jackson are the sites, respectively, of the annual golf and tennis tournaments, which will take place on Wednesday, May 30. Both events are sponsored by Medical Assurance Company of Mississippi.

House of Delegates

The opening session of the House of Delegates will convene on Thursday, May 31 at 9:00 a.m. Special guest will be Dr. Alan Nelson, president of the American Medical Association. Delegates will also hear an address by Dr. Ed Hill, MSMA president. Reports and resolutions will be introduced at this initial meeting of the House, for consideration by Reference Committees which are set to meet on Thursday and Friday afternoon. Delegates will reconvene on Sunday morning to take action on policy recommendations and to elect MSMA officers for 1990-91. The installation of Dr. Elmer Nix of Jackson as MSMA president for 1990-91 will mark the official conclusion of the 122nd Annual Session.

HMSS/YPS Joint Meeting

A joint meeting of MSMA's Hospital Medical Staff Section (HMSS) and Young Physicians Section (YPS) will take place on Thursday afternoon, May 31. Speakers include Mrs. Betty Bunsa of AMA's Department of Data Resource Development, who will discuss the AMA's National Physicians Credentialing Verification Service. Also on the program is Michael Ile, division counsel for health law for the AMA. He will speak on "Anti-Trust Legal Considerations for Physicians and Hospitals." Following these presentations the HMSS and YPS will conduct breakout sessions. At the YPS

OFFICIAL CALL

To all members of the Mississippi State Medical Association

The 122nd Annual Session of the Mississippi State Medical Association is called to meet in Jackson, Mississippi, on Wednesday, May 30, 1990, pursuant to Article V of the Constitution. The House of Delegates will be convened at the Coliseum Ramada Inn at 9:00 a.m. on May 31.

The Scientific Assembly will meet June 1 and June 2.

No member or guest will be permitted to participate in any aspect of the Annual Session until regularly registered.

J. Edward Hill, M.D.
President

Don Q. Mitchell, M.D.
Secretary-Treasurer

122nd Annual Session

Summary of Events

Wednesday, May 30

Tennis Tournament
Golf Tournament

Thursday, May 31

Continental Breakfast — Exhibit Hall
House of Delegates
Lunch with Exhibitors
American Society of Addiction Medicine
Miss. Foundation for Medical Care
HMSS/YPS Joint Meeting
Reference Committee
President's Reception — MS Agriculture and Forestry Museum

Friday, June 1

Continental Breakfast — Exhibit Hall
Medicine Plenary Session
MS Academy of Family Physicians
MS EENT Association
MS Psychiatric Association
MS Society of Internal Medicine
MS Society - Plastic & Reconstructive Surgery
Reference Committee
Medical Alumni Functions

Saturday, June 2

Surgery Plenary Session
Fifty-Year Club
MS Anesthesiology Society
MS Chapter, American College of Surgeons
MS Association of Pathologists
MS Section, American College of Ob-Gyn
MS Chapter, American College of Emergency Physicians
MS Dermatology Society
Workshop — "Investment/Retirement Planning"
Workshop — "Collections"
MSMA/MSMAA Membership Party — MS Arts Museum/Planetarium Complex

Sunday, June 2

Catholic Services
Protestant Services
House of Delegates

meeting members will hear a discussion of legislative issues by MSMA staff member Clare Elliott. Dr. Robert Bogin, chairman-elect of the AMA's Young Physicians Section will make a presentation on current activities and programs of the AMA/YPS.

Scientific Program

The Medicine and Surgery Plenary Sessions are scheduled for June 1 and June 2. Program information is outlined on page 173 of this issue of *Journal MSMA*. Fifteen scientific exhibits will be on display during the annual session. Members will receive 10½ hours of CME accreditation for attendance at the plenary sessions.

Technical Exhibit

This year's Technical Exhibit features more than 80 displays of the latest in resources for physicians. The program includes two breakfasts and one luncheon in the exhibit hall. This was planned to provide MSMA members with additional opportunities to view the exhibits and talk with the professional representatives who will be available to provide information.

MSMA Auxiliary

The MSMA Auxiliary will be conducting their 67th Annual Session during the week. Dennery's, one of Jackson's most familiar landmarks and longtime favorite restaurant, will be the location for the Auxiliary House of Delegates and the Annual Luncheon. The program for the MSMA Auxiliary annual session also includes a special event — a tea honoring Jean Hill, to be held at the home of Dr. and Mrs. Elmer Nix. MSMA and MSMA Auxiliary members will again have the opportunity to enjoy coffee, soft drinks and homemade treats at the Auxiliary's Hospitality Center, located in Gallery E of the Coliseum Ramada Inn.

Workshops

The 122nd Annual Session program includes two workshops of special interest. Members and spouses are invited to attend a workshop on investment and retirement planning, conducted by the AMA Investment Advisors. IC Systems, Inc. will conduct a workshop for physicians and office personnel on collections. Both workshops will be held on Saturday afternoon.

SCIENTIFIC PROGRAMS

122nd Annual Session Coliseum Ramada Inn

Medicine Plenary Session — Friday, June 1, 1990

8:00 a.m.	*"Immunization Update"* Sandor Feldman, M.D.
9:00	*"Rheumatic Fever Update"* David Watson, M.D.
9:30	*"Hemoglobinopathy Update"* Rathi Iyer, M.D.
10:00	*Break*
10:15	*"Has the United States Gone Overboard with Cholesterol Lowering Treatment?"* yes: Mr. Thomas Moore, Washington, DC no: Reagan Bradford, M.D., Oklahoma City, OK
11:45	Question and Answer
12:00	Adjourn

Surgery Plenary Session — Saturday, June 2, 1990
(Participants: MSMA and the MS Chapter, American College of Surgeons)

Symposium on Trauma

8:00	*"Acute Respiratory Distress Syndrome"* Farid Muakkassa, M.D.
8:25	*"Nutritional Problems in Trauma Patients"* John Griswold, M.D.
8:45	*"Trauma: The ACS Perspective"* Hugh Gamble, M.D.
8:55	*"Trauma in Mississippi: Definition, Incidence, Etiology"* Galen Poole, M.D.
9:15	*"Trauma Care at UMC: Economic and Other Realities"* David E. Bussonne
9:35	*"Management Problems Associated with Trauma in a Regional Hospital Setting"* Walter Jones, M.D.
10:00	Break
10:20	*"Prehospital Response to Trauma in Mississippi"* Wade Spruill, Jr.
10:40	*"Political Aspects of Trauma in Mississippi"* Alton B. Cobb, M.D.
11:00	*"Trauma: A National Epidemic"* Brent Eastman, M.D., La Jolla, CA
11:30	*"Where Do We Go From Here?"* James Hughes, M.D.
11:40	*"Panel Discussion"* Robert Rhodes, M.D.
12:15 p.m.	MS Chapter, ACS — Annual Luncheon/Business Meeting
1:15	Presentation by Dr. Eastman
2:00	*"Surgical Approach of Choice for Penetrating Cardiac Wounds"* Marc E. Mitchell, M.D., Surgery Resident, UMC, Jackson, MS

Counsel to Authors

THE JOURNAL welcomes manuscripts which should be submitted to the Editors at 735 Riverside Drive, Jackson, MS 39216, in original and at least one duplicate copy. They must be typewritten double spaced on 8½ by 11-inch white paper. **Brief manuscripts (about 2,500 words or 8 pages) will be given preference over longer articles.**

The author is responsible for all statements made in his work, including changes made by the manuscript editor. Manuscripts are received with the understanding that they are not under simultaneous consideration by any other publication and have not been previously published. All manuscripts will be acknowledged, and while those rejected are generally returned to the author, the JOURNAL is not responsible in event of loss. Manuscripts accepted for publication become the property of the JOURNAL and are copyrighted by the association when published. They may not be published elsewhere without written release and permission from both the JOURNAL and the author.

All copy must be double spaced, including legends, footnotes, and references. Generous margins at the top, bottom, and on both sides of the page should be allowed. Each page after the title page should be consecutively numbered and carry a running head identifying the paper and author.

Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes may be made.

Illustrations consist of all material which cannot be set into type such as photographs, line drawings, graphs, charts, and tracings. Illustrations should be submitted separately from text copy. Figures and drawings should be professionally prepared with black ink on white paper. Photographs should be of high resolution, unmounted, untrimmed, glossy prints. Each must be clearly identified. No charges are made to authors for up to four illustration engravings. More are not permitted unless voted on by two editors and extra costs must be absorbed by the author.

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In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material.

A thesis summary of 75 to 100 words must accompany each manuscript.

Reprints may be obtained at cost plus shipping charges from the association and **should be ordered prior to publication.** The JOURNAL reserves the right to decline any manuscript. Authors should avoid placing subheads in the text, and the Editors reserve the prerogative of writing and inserting subheads according to JOURNAL style. — *The Editors.*

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript. — *The Editors.*

Mississippi State Medical Association Auxiliary

Convention 1990

Wednesday, May, 30

3:00-5:00 pm	Registration — *South Lobby, Ramada Coliseum* Hospitality — *Gallery E*

Thursday, May 31

9:00 am-3:00 pm	Registration — *South Lobby, Ramada* Hospitality — *Gallery E*
9:00 am	MSMA House of Delegates
11:00 am	Pre-Convention Board Meeting & Luncheon — *Gallery B*
3:00-5:00 pm	Tea — Honoring Jean Hill *Home of Dr. and Mrs. Elmer Nix*
6:00 pm	Presidents Reception — *MS Agricultural and Forestry Museum*

Friday, June 1

8:00-10:00 am	Registration — *Dennery's*
8:00- 4:00 pm	Hospitality — *Ramada, Gallery E*
8:45 am	Coffee — *Dennery's (Copper Room)*
9:00	Auxiliary House of Delegates — *Dennery's (Copper Room)*
12:00 noon	Luncheon — *Dennery's (Garden Room)*
2:30 pm	Post-Convention Board Meeting — *Ramada, Gallery A*
6:00 pm	Alumni Reception/Dinners

Saturday, June 2

8:30 am	Past President's Breakfast — *Ramada, Gallery C*
10:30 am	WORKSHOP — Flowers by Arrangement — *Ramada, Gallery E*
12:00	Luncheon — National Delegates and Pages — *Ramada, Gallery B*
6:00 pm	MSMA/MSMA Auxiliary Party AMA-ERF Auction — *MS Arts Museum*



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AIR FORCE

PERSONALS

BONDA ABIDE announces the opening of the practice of family medicine at 930 Main Street in Greenville.

HOLLAND ADDISON of Jackson was speaker at a pastoral care seminar at Mississippi Baptist Medical Center.

GENE BARRETT of Jackson presented two papers on ligament injuries of the knee at the Anterior Cruciate Ligament Study Group in Engleberg, Switzerland, and served as discussant on three papers at the Mid-America Orthopaedic Association meeting in Point Clear, Alabama.

JOYCE B. BRASFIELD has opened her practice in family medicine at the DeSoto Medical Complex, 835 Brandywine, in Southaven.

C. RON CANNON of Jackson presented programs at the residents' Forum of the American Academy of Otolaryngology-Head and Neck Surgery Foundation in New Orleans.

ALTON B. COBB of Jackson was inducted as an honorary member of the Mississippi State University of Pi Alpha Alpha, a national public administration society.

ROBERT HUGH CURRY of Eupora spoke at a meeting of Webster General Hospital's cancer support group.

TERENCE P. DOORLY and WALTER W. ECKMAN announce the opening of their office for the practice of neurosurgery at 525 Willobrook Road in Columbus.

R. J. FIELD, JR. of Centreville, spoke at a meeting of the Association of Surgery Program Directors in San Antonio, Texas.

GLEN R. GRAVES of UMC made a presentation at the Obstetrics and Newborn Series meeting in Greenville.

ARTHUR GUYTON of Jackson was speaker at a meeting of the Mississippi Polio Survivors Association at Mississippi Baptist Medical Center.

HENRY K. HILLMAN announces the opening of his practice of general medicine with offices at the Greene County Hospital.

JACK G. HUDSON has associated with The Hattiesburg Clinic in the practice of family medicine, with his office at 2601 Mamie Street.

JAMES HUGHES of UMC was lecturer at the AO Seminar in Hanover, Germany.

JOE JOHNSTON of Mount Olive was speaker at a community education seminar on diabetes at Mount Olive High School.

JAMES LEAK of Centreville has been named chief of staff at Field Memorial Community Hospital.

GEORGE D. LYON has opened his practice of anesthesiology in Starkville, joining the medical staff of Oktibbeha County Hospital.

FRANCIS S. MORRISON of UMC was named president-elect of the American Society for Apheresis at the Society's annual meeting in San Francisco. He also was lecturer at the annual meeting of the South Central Association of Blood Banks in Dallas, Texas, and was named vice president of that organization's Board of Trustees.

WILLIAM C. NICHOLAS of UMC made presentations on diabetes at Lion's Club meetings in Clinton, Hattiesburg, Natchez and Corinth, and also spoke at medical staff meetings in Lexington and Monroe, Louisiana.



PERSONALS/Continued

WILLIAM D. OWEN announces the opening of his practice for child and adolescent psychiatry, adult psychiatry, adolescent drug abuse, weight control, and forensic child psychiatry at 2710 Beach Boulevard in Biloxi.

ANDREW PARENT of UMC made a presentation at a meeting of the Society of University Neurosurgeons in New Orleans.

SESHADRI RAJU presented a paper at the Second Annual American Venous Forum in Coronado, California and was discussant at the Southern Association for Vascular Surgery in Acapulco, Mexico.

WINN WALCOTT of Oxford served as visiting clinical faculty to Lebonheur Children's Hospital.

Specialty Societies Set Concurrent Meetings

A number of medical specialty societies have scheduled concurrent meetings during the MSMA's 122nd Annual Session. On Thursday, there will be a meeting of the American Society of Addiction Medicine. Friday's calendar includes meetings of the Mississippi Academy of Family Physicians, the Mississippi EENT Association, Mississippi Psychiatric Association, Mississippi Society of Internal Medicine, and the Mississippi Society of Plastic and Reconstructive Surgery.

The agenda for Saturday includes meeting of the Mississippi Dermatology Society, the Mississippi Anesthesiology Society, the Mississippi Association of Pathologists, the Mississippi Chapter of the American College of Surgeons, the Mississippi Section of the American College of Ob-Gyn, and the Mississippi Chapter of the American College of Emergency Physicians.

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NEW MEMBERS

ABIDE, BONDA ANN, Greenville. Born Greenville, MS., April 7, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned one year, Earl K. Long Hospital, Baton Rouge, LA; elected by Delta Medical Society.

CAMPBELL, JOHN L., II, Gulfport. Born New Castle, PA, Jan. 11, 1933; M.D., University of Pittsburgh School of Medicine, Pittsburgh, PA, 1959; interned one year, Pennsylvania; radiology residency, Cincinnati General Hospital, Cincinnati, OH, 1965-68; nuclear medicine fellowship, M.D. Anderson Hospital, Houston; elected by Coast Counties Medical Society.

DERVELOY, ROBERT J., III, Oxford. Born Laurel, MS, Jan. 24, 1954; M.D., Louisiana State University School of Medicine, New Orleans, 1978; interned one year and surgery residency, Louisiana State University Affiliated Hospitals, 1979-82; fellowship, cardiovascular and thoracic surgery, LSU, 1985-86; residency in cardiothoracic surgery, Tulane University, 1986-88; elected by North Mississippi Medical Society.

DOORLY, TERENCE P., Tupelo. Born Dublin, Ireland, June 30, 1955; M.D., University of Dublin, Ireland, 1979; interned one year, St. James' Hospital, Dublin, Ireland; neurosurgery residency, College of Physicians and Surgeons of Ontario and Saskatchewan, Canada, 1986-89; elected by Northeast Mississippi Medical Society.

FINLEY, RICHARD WADE, Jackson. Born Amarillo, TX, Aug. 11, 1949; M.D., Tulane University School of Medicine, New Orleans, 1976; interned one year, Rush-Presbyterian/St. Lukes Medical Center, Chicago; internal medicine residency, same, 1977-79; immunology residency, Immunology Research Center, Geneva, Switzerland, 1979-82; infectious disease residency, University of Colorado Health Sciences Center, Denver, CO, 1983-84 and one year, National Institutes of Health, Bethesda, MD; elected by Central Medical Society.

GLEASON, CATHERINE E., Oxford. Born Eustis, FL, Aug. 26, 1952; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and surgery residency, Tulane University Hospitals, New Orleans, 1982-88; elected by North Mississippi Medical Society.

GLYNN, MARGARET M., Vicksburg. Born St. Louis, MO, Nov. 4, 1963; M.D., University of Missouri School of Medicine, Columbia, 1986; interned and pediatric residency, St. Louis University Hospitals, St. Louis, MO, 1986-89; elected by West Mississippi Medical Society.

HARRINGTON, DONNA L., Tupelo. Born Santa Monica, CA, April 14, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and neurology residency, University, Arkansas, Little Rock, 1982-86; elected by Northeast Mississippi Medical Society.

HUTCHESON, ALFRED E., Brookhaven. Born Baldwyn, MS, July 22, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and medicine residency, University Medical Center, Jackson, MS, 1986-89; elected by South Central Medical Society.

KHAN, MOHAMMAD F., Waynesboro. Born Pakpattan, Pakistan, Aug. 10, 1952; M.D., King Edward Medical College, Lahore, Pakistan, 1975; interned and surgery residency, Pakistan, 1978-83; elected by South Mississippi Medical Society.

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NEW MEMBERS/*Continued*

LOPER, WILLIAM E., III, Vicksburg. Born Gulfport, MS, Sept. 5, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family practice residency, Montgomery Family Practice Center, Montgomery AL, 1986-89, elected by West Mississippi Medical Society.

MAGEE, JAMES SHIPMAN, Brookhaven. Born Brookhaven, MS, March 14, 1960; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and pediatric residency, University of Arkansas-Children's Hospital, Little Rock, 1986-89; elected by South Central Medical Society.

MESTAYER, ROLAND J., Pascagoula. Born Meridian, MS, Feb. 23, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; diagnostic radiology residency, same, 1985-89; elected by Singing River Medical Society.

MILES, JOHNNY F., JR., Greenville. Born Greenville, MS, Aug. 19, 1960; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and ob-gyn residency, same, 1986-90; elected by Delta Medical Society.

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MITCHELL, JOHN ROBERT, JR., Pontotoc. Born Oxford, MS, Jan. 12, 1951; M.D., University of Mississippi School of Medicine, Jackson, 1986; family practice residency, Tuscaloosa Family Practice Residency Program, Tuscaloosa, AL 1986-89; elected by Northeast Mississippi Medical Society.

PURVIS, RONNYE D., Meridian. Born Milwaukee, WI, Aug. 24, 1956; M.D., University of Wisconsin Medical School, Madison, 1984; interned one year, Mt. Sinai Medical Center, Milwaukee, WI; ob-gyn residency, Mercy Hospital and Medical Center, Chicago, 1985-89; elected by East Mississippi Medical Society.

ROBERTSON, KERRI M., Jackson. Born Vancouver, British Columbia, Canada; M.D., University of British Columbia, 1980; interned one year, St. Paul's Hospital, Vancouver; anesthesia residency, University of British Columbia, Vancouver, 1981-86; elected by Central Medical Society.

SCHEER, THOMAS FREDERICK, Meridian. Born St. Louis, MO, Sept. 20, 1945; M.D., Medical College of Georgia School of Medicine, Augusta, 1979; interned one year, University of New Mexico, Albuquerque; radiology residency, University Utah Medical Center, Salt Lake City, 1980-83; elected by East Mississippi Medical Society.

SEALS, MICHAEL R., Laurel. Born Jones Co., June 19, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and neurology residency, Medical College of Wisconsin Affiliated Hospitals, Milwaukee, 1985-89; elected by South Mississippi Medical Society.

SHAAK, GEORGE WILLIAM, Jackson. Born Metairie, LA, July 19, 1959; M.D., Louisiana State University School of Medicine, New Orleans, 1984; interned and surgery residency, University of Arkansas for Medical Sciences, Little Rock, 1984-89; elected by Central Medical Society.

SHROCK, MICHAEL B., Philadelphia. Born Durant, MS, Feb. 21, 1955; D.O., West Virginia School of Osteopathic Medicine, Lewisburg, 1985; interned one year, Sun Coast Hospital, Largo, FL; family medicine residency, Selma, AL 1986-88; elected by East Mississippi Medical Society.

STROUD, CATHERINE H., Jackson. Born Jackson, MS, Dec. 22, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned, medicine residency and adolescent medicine fellowship, Greenville Hospital System, Greenville, SC, 1985–89; elected by Central Medical Society.

WALKER, EVELYN RICKS, Jackson. Born Cleveland, MS, March 3, 1961; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned one year, Baptist Memorial Hospital, Gadsden, AL; family medicine residency, University Medical Center, Jackson, MS, 1987-89; elected by Central Medical Society.

WHITLOCK, RICHARD S., Pascagoula. Born Memphis, TN, Dec. 23, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family medicine residency, University of Alabama, Tuscaloosa, 1986-89; elected by Singing River Medical Society.

WILBANKS, MILLARD, M., Greenville. Born Nov. 12, 1948; M.D., Hahnemann Medical College, Philadelphia, PA, 1980; interned and medicine residency, Howard University Hospital, Washington, DC, 1980-83; gastroenterology fellowship, same, 1983-85; elected by Delta Medical Society.

WILLIS, EDWARD R., JR., Bay St. Louis. Born Greenville, MS, June 16, 1951; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and otolaryngology residency, LSU Medical Center, Shreveport, LA, 1984-89; elected by Coast Counties Medical Society.

WOODBRIDGE, ANN ROBIN, Jackson. Born Jackson, MS, Oct. 20, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and ob-gyn residency, LSU Medical Center, Shreveport, LA, 1985-89; elected by Central Medical Society.

Mark Your Calendar Now!
MSMA's 122nd Annual Session
May 30-June 3, 1990

Coliseum Ramada Inn
Jackson, MS



Kidney Specialist Gives First Guyton Lecture

A well known specialist in kidney disease was the first Arthur C. Guyton Distinguished Visiting Professor at the University of Mississippi Medical Center.

Dr. Robert W. Schrier, chairman of the Department of Medicine at the University of Colorado Health Sciences Center, gave the Guyton Lecture March 28.

The lectureship and cash award honors Dr. Arthur C. Guyton, eminent physiologist, textbook author and chairman of the UMC Department of Physiology and biophysics until his retirement in September, 1989.

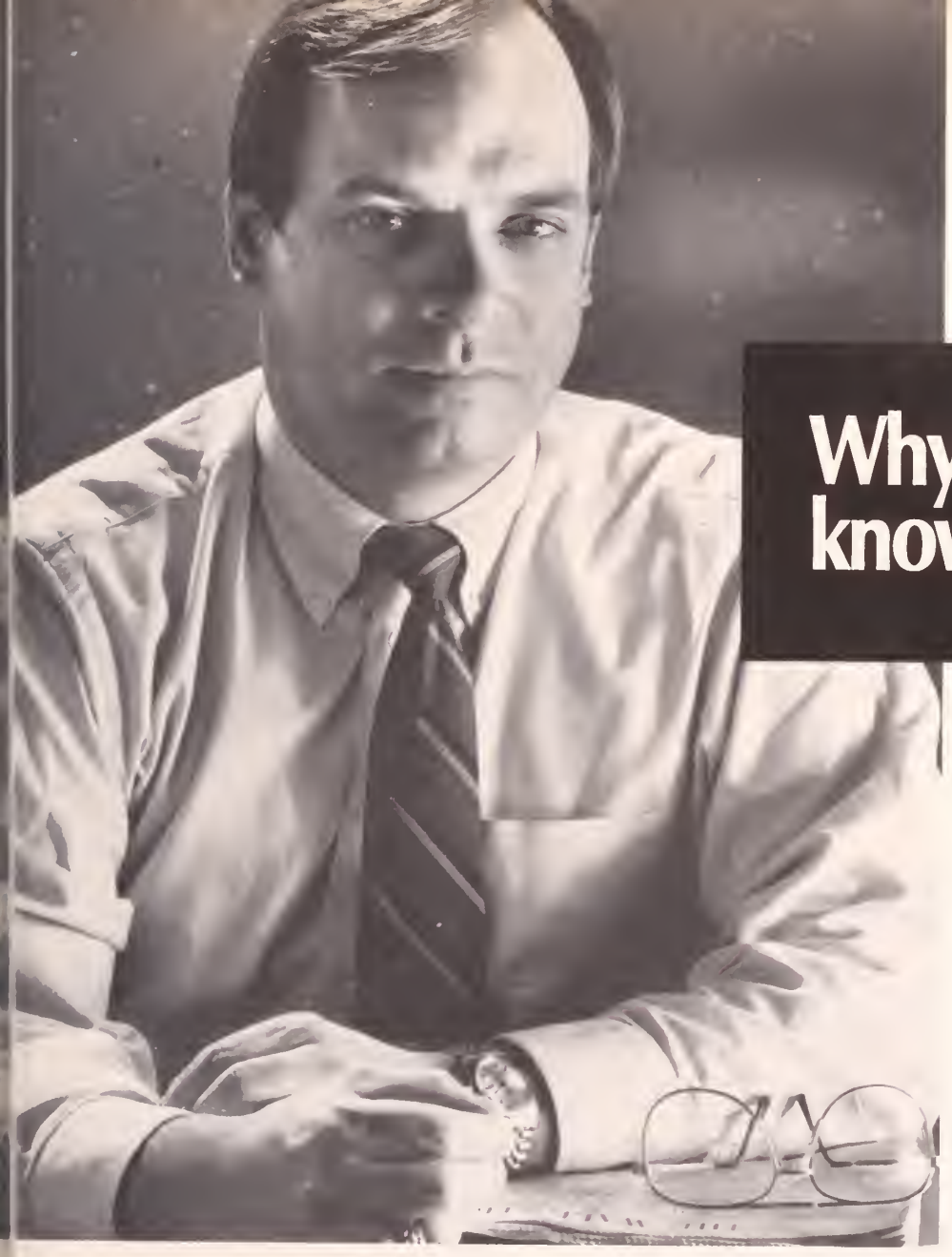
His successor Dr. John Hall said the awards committee will solicit nominations annually from medical schools and research institutions nationwide for the award.

"Because of the magnitude of Dr. Guyton's contributions to science and especially to physiology, we expect this to become a highly coveted honor in the scientific community," Hall said.

Dr. Schrier, well known for his work in cardiovascular and kidney diseases, has received the Pasteur Medal from the University of Strasbourg, France, the Mayo Soley Award for Biomedical Research from the Western Society for Clinical Investigation, and the David Hume Memorial Award from the National Kidney Foundation.



Dr. Arthur Guyton, left, welcomed Dr. Robert W. Schrier, chairman of the Department of Medicine at the University of Colorado Health Sciences Center, who was the first Arthur C. Guyton Distinguished Visiting Professor at the University Medical Center in Jackson.



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POSTGRADUATE CALENDAR

May

ADVANCED BURN LIFE SUPPORT PROVIDER COURSE
May 30
University Medical Center, Jackson

June

NEUROSURGICAL SOCIETY ANNUAL MEETING
June 15-16
Ramada Renaissance Hotel, Jackson

OCCUPATIONAL MEDICINE CONFERENCE
June 21
Hinds General Hospital, Jackson

CLINICAL LIPIDS DISORDERS
June 23
Ramada Renaissance Hotel, Jackson

ADVANCED TRAUMA LIFE SUPPORT INSTRUCTOR COURSE
June 26-28
University Medical Center, Jackson

August
OPHTHALMOLOGY UPDATE 1990
August 17-18
Ramada Renaissance Hotel, Jackson

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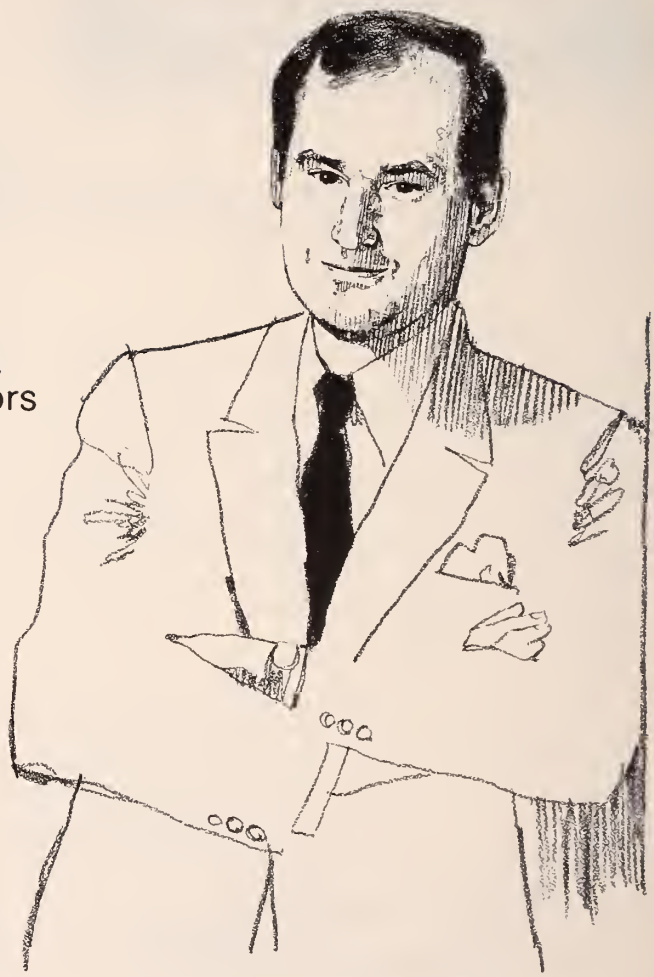
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Decatur, AL 35609-2240





R. Joseph Mossy, Jr. graduated with honors from St. Stanislaus in 1974. During his years here, he was a member of the Weightlifting Club and an editor on the yearbook staff. Joe is currently president of Mossy Motors, and has served in the Automotive Division of United Way.

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The AMA
Hospital Medical Staff Section
Fifteenth Assembly Meeting
June 21-25, 1990
Chicago Marriott Hotel
Chicago, Illinois

Highlights of the Annual Meeting will include:

- an educational program entitled, "Building Effective Hospital Physician Relationships: Ten Success Stories"; Stephen M. Shortell, Ph.D. will present the results of his study on the working relationships between ten selected hospitals and their medical staffs;
- presentation by the AMA-HMSS Governing Council of reports on medical staff issues including the Impact of Hospital Bankruptcy, the Role of Hospital Governing Boards in Professional Review, and Information Sharing Among Medical Staffs;
- recommendation of policy to the House of Delegates on Prioritization of Health Care Expenditures and Notification of Denials by the PRO;
- AMA-HMSS Governing Council elections for the positions of Chairman, Vice-Chairman, Secretary, and one Member-at-large.

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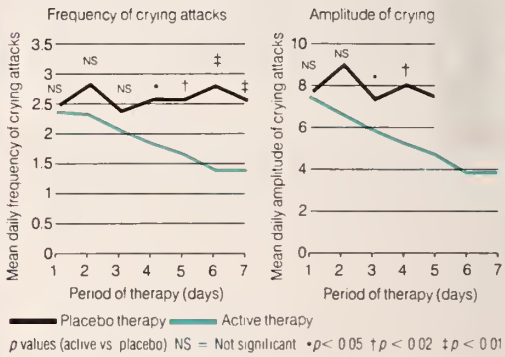
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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner* 1988;232:508

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JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

JUNE 1990



J. Elmer Nix, M.D. — 1990-91 MSMA President

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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

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NEWSLETTER

June 1990

Dear Doctor:

The time has come for me to write my final newsletter as managing editor of your Journal MSMA. I do this with a profound sense of gratitude for your support through the years. When I arrived here in January of 1979, I did not fully realize what an interesting and exciting field the profession of medicine was, and I could not anticipate at that time the many opportunities that would arise for my personal growth and development. Although I look forward with great anticipation to these new changes in my life, it is hard to leave behind so many good friends. But I take with me wonderful memories, and I trust that I will see many of you again.

> Your new managing editor is Ginger Cocke. You will find that she has many gifts and talents, and she will be a great asset to your MSMA staff.

According to the results from AMA's 1990 Surveys of Physicians and Public Opinion on Health Care Issues, Americans choose their personal physician the old-fashioned way: by word of mouth and convenience, even though there is concern about cost. When asked specific questions, 51% of those surveyed said office location influenced selection and 50% said recomendations from friends and relatives. Only 20% said fees and charges were a factor.

At press time, MSMA's 122nd Annual Session was about to get underway in Jackson. Watch for the complete report in the July issue of your Journal MSMA.

Sincerely,

Patsy Twiner

Patsy S. Twiner
Managing Editor



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AIR FORCE

DATELINE

Nutri/System Diet Advertisements

Chicago, IL - "Contrary to implications set forth in recent Nutri/System diet program advertisements, the AMA does not endorse that company's or other diet plans," according to James S. Todd, MD, acting executive vice president of the AMA. Nutri/System has been notified to discontinue using the AMA's name in its advertisements.

Nutrition Screening Led by AAFP

Washington, DC - Calling an individual's nutritional status an "important vital sign, just as blood pressure or pulse," a prestigious coalition of leaders in medicine, health care and aging lauched a five-year effort today to promote routine nutrition screenings and better nutritional care in America's health care system.

Don't Start Cystic Fibrosis Tests

Chicago, IL - Despite the technological ability and commercial pressures to do so, mass screenings for cystic fibrosis should not begin anytime soon, according to a report in the May 23, JAMA. The potential for CF carrier screening programs will create an entrepreneurial opportunity that will dwarf all previous screening programs.

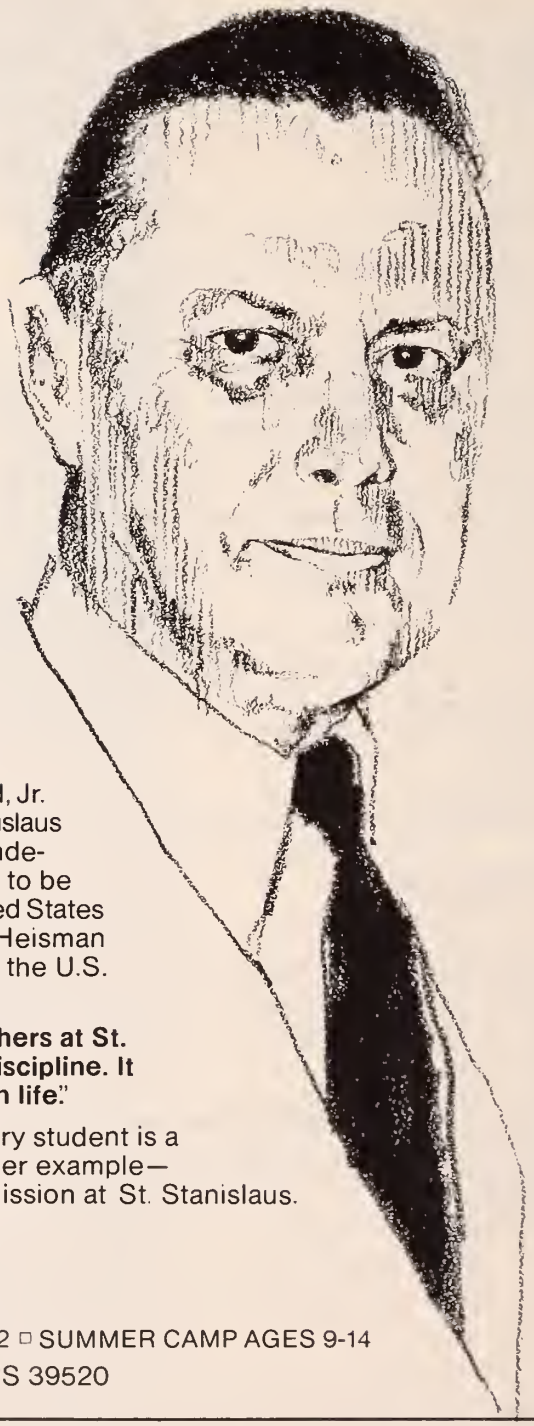
FDA Approves AZT For Children

Washington, DC - The FDA agreed to expand indications for AZT (zidovudine) to include treatment of HIV-positive children, ages 3 months and older, regardless of whether they are symptomatic. The children must have abnormal laboratory results indicating significant suppression of their immune systems because of HIV infection.

Kids And Tobacco: Who Profits?

Chicago, IL - It is estimated that more than 3 million American children under 18 years of age consume 947 million packs of cigarettes and 26 million containers of smokeless tobacco yearly. These tobacco products account for annual sales of $1.26 billion. The government's "war on drugs" has failed to target the one drug that kills the most people.





Felix A. "Doc" Blanchard, Jr. graduated from St. Stanislaus in 1942, having played fullback on the undefeated football team of 1941. He went on to be named three-time All American at the United States Military Academy, and was awarded the Heisman Trophy in 1945. "Doc" served 25 years in the U.S. Air Force, retiring as colonel.

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
June 1990, Volume XXXI, Number 6

ORIGINAL PAPERS

A Rehabilitation Hospital's Approach to the Problem of Substance Abuse

HENRY E. IRBY, M.D. and
JUDY FITZPATRICK, Ph.D.
Jackson, Mississippi

OVER THE PAST DECADE, it has become apparent that the problems of alcohol and drug abuse account for a large percentage of admissions to hospitals. The problems of substance abuse in the rehabilitation patients are profound and detrimental to achieving optimum wellness. Moore, *et al* (1989) indicated that 25% of inpatients at Johns Hopkins Hospital, had a substance abuse problem. It is suggested that the percentage of abuse is higher in the rehabilitation setting.

The predominant drugs of abuse differ according to services. On the Orthopedic, Chronic Pain and Arthritis Service, pain medications, narcotics, such as hydrocodone, propoxyphene and merperipine are frequently abused, along with alcohol.

The spinal cord injured patients tend to abuse benzodiazepines, marijuana and alcohol, with narcotics being the least abused of the different classes.

Traumatic brain injury patients primarily have alcohol abuse problems, in combination with marijuana and other substances. Younger stroke patients are comparable to the traumatic brain injury patients in their choices of drugs of abuse. Patients under the age of 50, with histories of hypertension and stroke, usually have a history of alcohol abuse. The older patients admitted to the Stroke Service with a history of substance abuse have tended to abuse combinations of alcohol and benzodiazepines.

It is noted that during the period of time a patient is confined to a hospital for any primary illness, screening and intervention for substance abuse is indicated. It is during this time that families and significant others can be interviewed, counselled and family support enlisted for the patient both while in rehabilitation and after discharge.

Many diagnostic screening procedures are performed in hospitals. Patients are screened for anemias, urinary tract infections, diabetes, tuberculosis, renal disease, cardiac problems, etc. It is not routine to address the problem of substance abuse in acute care or rehabilitation hospitals. It is difficult to assess the percentage of patients who suffer head injuries, spinal cord injuries, strokes, orthopedic injuries, or other traumas which result from substance abuse because it is not routine to measure alcohol/drug levels in most emergency rooms. There is a strong correlation between substance abuse and the different conditions causing a person to be physically and cognitively disabled such as head injuries, spinal cord injuries, cerebral vascular accidents and orthopedic injuries.

From the Mississippi Methodist Rehabilitation Center, Jackson, MS.

Spinal Cord Injuries

Many studies of the role of substance abuse in spinal cord injuries indicate a significantly high percentage of patients were abusing mood altering substances at the time of accident. Unpublished studies from Mayo Clinic indicate 53% of traumatic spinal cord patients were legally intoxicated at the time of injury. Kirubakaran, *et al* (1986), reported 70.1% of the study patients were using alcohol before injury and 75% reported recreational drug use after injury. In 1984, a Veterans Administration study (Frisbie, *et al*) involving 155 patients with spinal cord injuries, it was revealed that 68% had a history of drinking before the injury, 28% were drinking at the time of injury, and 75% were drinking after injury. In 1980, a study by O'Donnell, *et al*, revealed that out of 54 patients studied, 87% of their spinal cord injury patients had a history of substance abuse before injury, 62% of the injuries were substance related and 68% resumed use of the substance after their injury.

As reported by Sweeny and Foot in 1987, many injuries occur as a result of drug and/or alcohol abuse and the patients' lifestyle. They found 11.4% of their spinal cord patients had ingested two alcoholic beverages within two hours of injury and over 34% had taken three or more alcoholic drinks within two hours of injury, giving a total of 45.9% of the patients in their study drinking immediately prior to the accident. The complications from alcohol and drug abuse are magnified in the spinal cord patient post injury and post rehabilitation period according to a study done by Trieschmann, *et al* (1983). Geisler, *et al* (1988), found 4.1% of the deaths in their population of spinal cord injuries were caused by liver complications from alcohol abuse.

Head Injury

There are an estimated 500,000 new cases of head injuries yearly and according to Rosenthal, *et al* (1988), alcohol abuse was the most significant contributing factor. Blood alcohol levels were obtained in 86% of all patients studied, and 72% of these had a positive blood alcohol level on admission. Fifty-two percent were considered legally intoxicated with a blood alcohol level over 0.1% milligrams or higher. Levin, *et al* (1982) reported alcohol was implicated in 29% of their head injured males and 10% of the head injured females, totaling 39%. Sparadeo, *et al* in 1989, reported that 72% of the patients studied had been drinking immediately prior to injury. The incidences of intoxication and history of alcohol abuse were high. Intoxication rates ranged from 29 to 58% while alcohol abuse histories ranged from 25 to 68%. It has been demonstrated that head injury patients under the influence of alcohol and drugs remain longer in coma and rehabilitation settings because of prolonged periods of agitation and cognitive dysfunction.

Stroke

There is an increased stroke rate in patients under 50 years of age who abuse alcohol. They are predisposed to cardiac arrhythmia, vascular problems and hypertension, thus increasing the risk of stroke. There is little information available on the correlation between increased incidences of stroke and alcohol or drug abuse.

Chronic Pain

Studies done by Walsh, *et al* (1982), showed an estimated 30 to 50% of chronic, non-malignant pain patients have a significant drug dependency problem. Patients in our hospital admitted for chronic pain and chronic orthopedic problems fall within the 30 to 50% range of alcohol and drug dependency. There appears to be a slightly higher than average percentage of patients admitted for acute orthopedic procedures who are dependent on alcohol and drugs.

Recognizing the many deleterious effects during rehabilitation and the complications at discharge, an ongoing program of intervention, education and counseling was developed while the patient was in rehabilitation. Beginning in January 1989, a screening process was begun on all patients admitted to the hospital for rehabilitation of spinal cord injury, head trauma, stroke, arthritis and chronic orthopedic problems. The substance abuse program is initiated through screening by the social work and/or nursing.

The Substance Abuse Team consists of a certified addictionologist, a Ph.D. level psychotherapist, a certified alcohol and drug counselor, an intern and a secretary. The addictionologist meets with the patient and provides a secondary diagnosis. Written permission to work with each patient and contact family members is obtained. As needed, intelligence, academic and personality testing is done.

Initial family contact is made by a team member while a self inventory is completed by the individual patient. The patient becomes involved in two hours of group substance abuse counseling and alcohol/drug education along with one to 1½ hours of individual and family work daily. The program is incorporated into the day's activities along with the

other modalities of rehabilitation.

Primary goals in working with patients during rehabilitation are to help them recognize the problems associated with substance abuse and break through the denial systems associated with substance abuse and dependency. As the patient approaches discharge, an after care plan is formulated with the patient and significant others. The After Care Plan may include:

(a) referral to primary treatment center for chemical dependency;
(b) referral to an established outpatient program for substance abuse;
(c) referral to Alcoholics Anonymous (AA) with a temporary sponsor contact;
(d) referral of families to appropriate support groups such as Alanon and Alateen.

To date, the team has provided counseling and education to those patients with problems in substance abuse referred through screening. Fifteen percent have completed the educational components. AA and support group sponsors have been provided for 33% of the patients. Outpatient referrals were made to 12% of the patients and 40% of identified patients have been referred to inpatient treatment (Nine percent of the inpatient referral group have been noncompliant to any goals specific to substance abuse).

It is evident alcohol and other drug abuse are a nationwide problem with extensive implications and serious consequences for persons with physical disabilities. Alcohol and other drugs are major contributing factors in disabling and traumatic injuries. Following rehabilitation, the inappropriate use of alcohol and other drugs by disabled persons interferes with the rehabilitation process and its outcome by impairing health, decreasing vocational, educational and functional abilities.

Prompt assessment, intervention and referral to appropriate treatment are essential in the rehabilitation setting to assist the individual to return to optimum wellness. ★★★

1350 East Woodrow Wilson (39216)

Acknowledgement

We gratefully acknowledge the contribution of our patients, staff and administration. A special thank you to: Myrtle Irby, R.N., an Alanon, whose support was invaluable, Dr. James Mayr for his interest, Mrs. Betty Bowen for her assistance, Mrs. Betty Richardson for her skills, Ms. Mary Cranfield for her research and Ms. Pat Brown for her encouragement and support.

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Patients With Localized Pancreatic Adenocarcinoma in Central Mississippi: A Retrospective Analysis of Survival

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Factors influencing the survival of central Mississippi patients with adenocarcinoma of the pancreas were analyzed by a retrospective analysis of the two largest tumor registries in the state. The authors report that this Mississippi data agree with very recent reports describing significant benefit from chemoradiotherapy in localized disease, and suggests a less fatalistic attitude of the medical community towards localized pancreatic carcinoma is appropriate.

CANCER OF THE PANCREAS ranks fourth in the United States as a cause of cancer death, ranking after lung, large bowel, and breast as site of origin. The Mississippi State Board of Health vital statistics places adenocarcinoma of the pancreas consistently fifth as a cause of neoplastic death in Mississippi with adenocarcinoma of the prostate taking fourth place in this state. The total number of deaths in Mississippi from 1982 through 1987 for each of the five major leading cancer sites is summarized in Table 1.

Pancreatic adenocarcinoma is a disease notoriously refractory to many forms of therapy, and in spite of advances in surgery, radiation therapy, and chemotherapy, meaningful benefit from treatment has been slow to develop. Highly significant advances in the understanding of pharmacologically induced alterations in cellular responses to radiotherapy have led to the introduction of the term chemoradiotherapy to designate the concurrent use of systemic cytotoxic agents with localized radiotherapy. In this setting the choice of systemic therapy is typically predicated on optimizing local killing of tumor by the combined modality attack rather than on an approach that might be best if the systemic agents were used alone. In December of 1988 Dr. Ritsuko Komaki[1] and Dr. James Cox, physician-in-chief at the M.D. Anderson Hospital, reported an extraordinary 19-month median survival in a small group of patients treated aggressively with

From the Department of Radiation Oncology, Mississippi Baptist Medical Center (Drs. Smith and Reagan); the Department of Radiation Oncology, University of Mississippi Medical Center (Dr. Routh); the Department of Preventive Medicine, University of Mississippi Medical Center (Dr. Hsu); and the Department of Oncology, Mississippi Baptist Medical Center (Drs. Stubblefield, Furr, Houston, Gillespie and Graham).

a chemoradiotherapy regimen employing prophylactic liver radiotherapy as part of the treatment program. This report closely followed a June 1988 report by the Gastrointestinal Tumor Study Group (GITSG)[2] showing statistically improved survival in localized pancreatic adenocarcinoma patients treated with chermoradiotherapy as contrasted with the significantly less effective combination chemotherapy alone.

It was known to us at the time of these reports that a small number of central Mississippi patients with localized pancreatic adenocarcinoma had received chemoradiotherapy in their management, and that some of these patients had done very well. This study was a retrospective analysis of pancreatic adenocarcinoma survival intended to determine if localized chemoradiotherapy treated patients or any other obvious patient subgroups seem to have done particularly well with this disease.

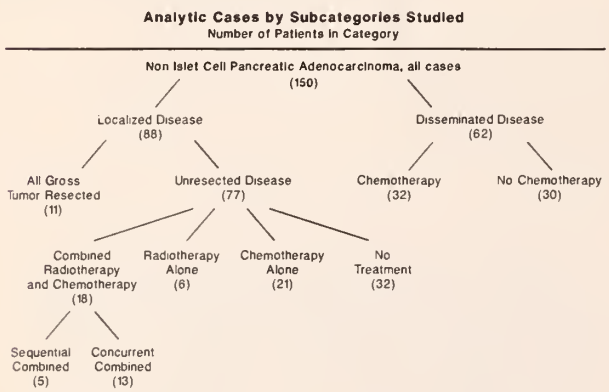


Figure 1.

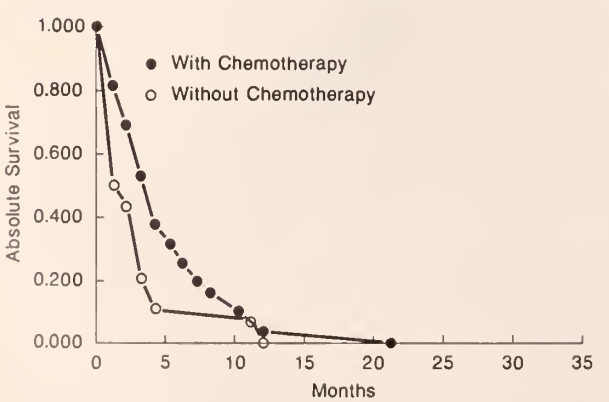


Figure 2. Survival of extensive disease patients with and without chemotherapy.

TABLE 1

TOTAL MISSISSIPPI DEATHS 1982 THROUGH 1987 FOR EACH OF THE TOP FIVE MAJOR CANCER SITES

Lung	8234
Colorectum	2853
Breast	1973
Prostate	1886
Pancreas	1578

Materials and Methods

The pancreatic cancer patients of the tumor registries of the Mississippi Baptist Medical Center (MBMC) and the University of Mississippi Medical Center (UMC) were collected for the years January 1982 through December 1987. Patients with islet cell carcinoma and mucinous cystadenocarcinoma were excluded because these populations groups clearly represent disease entities with a distinct natural history and relatively prolonged survival. From the combined experience MBMC could furnish 106 and UMC 44 patients for a total of 150 analytic cases. These 150 cases were classified according to stage and to treatment modality as shown in Figure 1.

Patients were first divided for analysis into two groups according to whether the radiotherapy could encompass all gross tumor. Group I consisted of patients confined to the pancreas, patients exhibiting extension to adjacent organs, or patients extending to regional nodes ± local extension. Group II consisted of patients with spread to peritoneal surfaces, liver, or distant sites.

Patients with localized disease were further subclassified as concurrent combined if 5-fluorouracil chemotherapy had been administered within 24 hours of one or more radiation treatments. All other patients receiving both modalities were classified as sequential combined.

Nonparametric estimates of the Kaplan-Meier survival curves for subcategories of patients were computed by using the SAS (Statistical Analysis System) computer package. The log-rank test for homogeneity and the chi-square statistical test were employed to compare the survival experiences of subcategories of patients.

Results

The survival of patients in Group II as a function of chemotherapy (median = 4 months) vs. no chemotherapy (median = 1.5 months) can be found in Figure 2. While radiotherapy may have been used palliatively with these patients, it was not yet sur-

vival significance. ($\chi^2 = 3.753$, df = 1, P = 0.053) Figure 3 shows survival curves for localized pancreatic carcinoma patients treated by radiotherapy alone (median = 4 months), chemotherapy alone (median = 9 months), or both of these modalities employed successively (median = 8 months). In spite of some evidence that chemotherapy prolongs life, the results were not statistically significant ($\chi^2 = 5.925$, df = 2, P = 0.052) partly because patient numbers in these groups were small.

Figure 4 shows survival curves for certain subclassification of localized pancreatic adenocarcinoma, and in this analysis three subclassifications were analyzed: (1) patients with single modality treatment or multiple modality treatment delivered sequentially pooled into one group, (2) patients treated with combined modality treatment given concurrently (chemoradiotherapy), and (3) patients receiving no treatment. This analysis demonstrates that there is a statistically significant difference in survival among these three groups ($\chi^2 = 6.170$, df = 2, P = 0.046). The patients receiving chemoradiotherapy (group 2) displayed a survival benefit (median = 9 months) when compared with those patients who received no treatment (median = 4.5 months). Figure 4 also shows an apparent benefit to the patient subclassification representing pooled treatment modalities (median = 7 months), although this benefit was shorter than that seen in group 2, did not reach statistical significance.

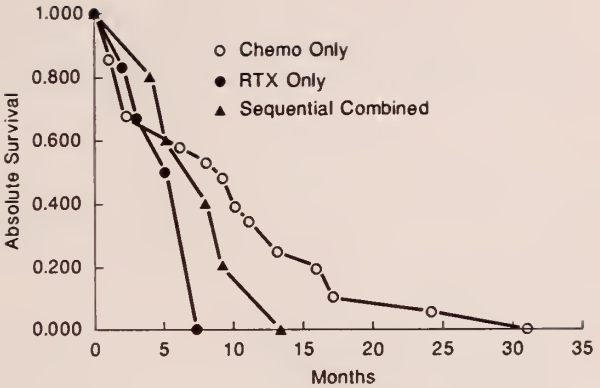


Figure 3. Survival of patients with localized disease by treatment modality.

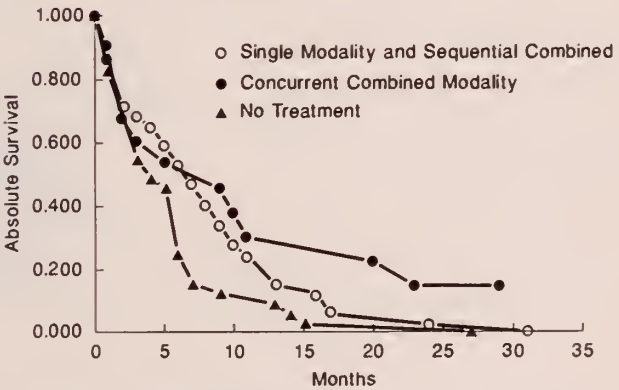


Figure 4. Survival of patients with localized disease by treatment modality.

Discussion

A chronology of evolving efforts at treatment of unresectable adenocarcinoma of the pancreas is shown in Table 2. The last two entries in the column "Radiotherapy and Chemotherapy" are particularly relevant to the findings described in this report. Also note in these reports the major improvement recently reported in median survival. Evidence summarized in this table suggests that survival of unresectable localized pancreatic adenocarcinoma is improved by (1) higher doses of radiotherapy versus lower doses, (2) the use of chemoradiotherapy versus either radiotherapy or chemotherapy used singly or successively, and (3) prophylactic liver radiotherapy as a technique for treating probable first site of metastatic relapse. Elective liver irradiation for clinically localized pancreatic carcinoma has been based conceptually on documented natural history showing an eventual hepatic relapse rate of up to 90% in those patients with localized pancreatic adenocarcinoma who were treated using localized radiotherapy alone.[1] No patients in this review received elective liver irradiation.

The relatively small number of patients treated with combined modality management in central Mississippi reflects considerable uncertainty among physicians as to optimal treatment for pancreatic cancer. The results summarized in Chart 2 leave room for encouragement, and even more enthusiasm has been generated recently by the use of protracted infusion 5-FU sensitization, since it is becoming now widely perceived that rather marked improvement in chemoradiotherapy benefit can be obtained by this technique.

Retrospective studies are subject to many potential forms of bias since the selection process is not random and other confounding factors could have been covariant with those variables seemingly beneficial. The significant number of two year survivors in localized pancreatic adenocarcinoma pa-

TABLE 2

A CHRONOLOGY OF LOCALIZED UNRESECTABLE PANCREATIC ADENOCARCINOMA TREATMENT

Series (Date of Report)	*No. of Patients*	*Median Survival Months*				*1 year Survival*	*2 year Survival*
		Total Group	*Radiotherapy*	*Chemo*	*Radiotherapy & Chemotherapy*		
[1]Mayo (1969)							
Untreated	67	6.0				8%	2%
3500 cGy for 4 weeks ± 5-FU	64		6.3		10.4		
[2]Duke (curative group) (1973)							
6000 cGy for 10 weeks + chemotherapy (Radiation therapy: 9 patients; radiation + chemotherapy: 11 patients)	20		8		10		
[3]GITSG (1976) (1979)							
4000 cGy for 6 weeks + 5-FU	79				6.9		
6000 cGy for 10 weeks ± 5-FU (XRT: 25 patients; XRT + chemotherapy: 75)	100		5.1		8.7		
[4]Thomas Jefferson (1979)							
6300-6700 cGy 7-9 weeks ± chemotherapy (Radiation therapy: 11 patients; radiation + chemotherapy: 7 patients)	18	11.8	7.5		13		
[5]Medical College of Wisconsin (1980)							
<4500 cGy ± chemotherapy	6	7				54	21
>4500 cGy ± chemotherapy	14	14					
[6]GITSG (Oct. 1981)							
6000 cGy radiotherapy alone			6				
4000 cGy radiotherapy + 5 FU (bolus)					9.1		
6000 cGy radiotherapy + 5 FU (bolus)					12.4		
[7]GITSG (July 1988)							
SMF 5 FU concurrent combined + subsequent SMF	21			8		19	
5400 cGy	22				10.5	41	
[8]Medical College of Wisconsin (Dec. 1988)							
5 FU by bolus and prophylactic liver 6120 cGy (pancreas) 2340 cGy (liver)	16	22			19	67	47

tients treated by combined modality treatment in central Mississippi, and the complete agreement of this finding with an evolving peer review literature as to efficacy of combined management suggests that further study of this treatment approach should be systematically pursued. ★★★

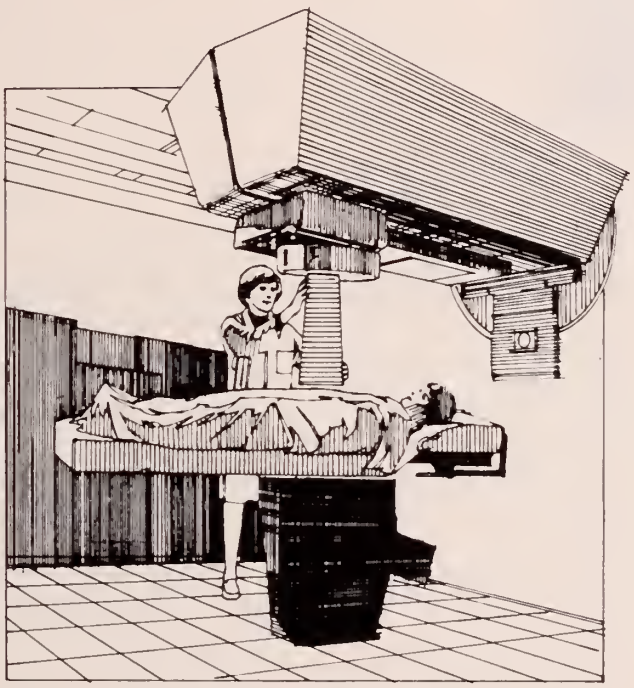
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COMMENT/Continued

While thumbing through her magazines, she starts to think how fortunate she is to have a family doctor on hand at all times. It is a secure feeling to know that in case of an emergency, there will be a physician in town and close by so one won't have a long way to drive to an emergency center. Often, time is of the essence in a critical situation. Also, in large hospitals a person could lose that feeling of knowing with whom he or she is dealing. Whereas, a family physician is known by almost everyone in town.

A family physician is a cornerstone of any community. They attend many activities sponsored by the town and work closely with the people during special events and emergencies. My home town physician helps our school by giving the athletes free examinations and by coming to football games in case of emergencies. People depend on family physicians just as they would a police officer or a banker.

It is often forgotten that family physicians, like anyone in the medical field, must go through great lengths to get an education, and they must invest large amounts of time and money just to get to the point of beginning their practice in the medical field, but they must also stay abreast of all new techniques and medications. They are on call twenty-four hours a day and often have to work very long hours.

Many people complain about the prices that professionals in the medical field charge, but these people don't understand the tremendous price physicians pay everyday for our well-being — not to mention the up-keep of facilities, the purchase of supplies and the payment of office staff.

I am proud that I have a family physician in my home town, just like the case with the mother and child. I'm sure one day the child who was trying so hard to make it out of that doctor's office will look back and fully appreciate the fact that he had a family physician to go to, and most likely will depend on a family physician for his family, as well.

In closing, a family physician is someone we depend on every day. He or she is a person that will be there for us no matter what the time or condition. He is a person that cares about us and the well-being of our community, someone who has devoted his whole life to caring for other people. We are fortunate to have people like family physicians in our lives.

SHAWN ASKEW

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Reporting on Risk: Getting It Right in an Age of Risk. Victor Cohn. The Media Institute, Washington, DC. $8.95. 1990.

Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions. (Report of the U.S. Preventive Services Task Force). Michael Fisher, Editor. Williams & Wilkins, Baltimore. 1989.

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LETTERS

TO THE EDITORS: In the January 1990 JOURNAL MSMA (page 13) there is a brief discussion of Implied Consent. I know that this is not an earthshaking point but Implied Consent in the law is very different from how most physicians (and some attorneys) interpret the term.

There are basically two kinds of consent that *a patient can give:* oral and written. Oral consent is just as valid as written consent unless there is a specific statutory requirement for written consent in certain procedures such as is required for abortions by some states. Obviously, written consent is preferred for most procedures since it may avoid questions as to the nature and sufficiency of a patient-plaintiff's spoken words or gestures. Oral consent may be manifested by spoken words, or a gesture such as nodding one's head in the affirmative or by presenting one's arm out for an immunization. The nodding of one's head or presenting of one's arm for an immunization is not implied consent. Implied consent is consent that will be "implied by law" even though *there is no manifestation of consent by the patient.* The most common occasions for implying consent involve emergencies where the patient is a minor, unconscious, or otherwise incapable of consenting. In such emergencies that endanger the life or health of the patient and require immediate medical intervention, the courts have said that if the patient was not a minor or not unconscious in these situations, he would have obviously given his consent; and therefore consent is implied by law.

Sincerely,
A. EUGENE LEE, M.D., J.D.

PRESIDENT'S PAGE

(Continued from page 198)

difficult problems and the answers will not come easily.

If we wish to regain and maintain the respect of society, I suggest we take a closer look at some ethical issues, adhere to our ethical principles and take appropriate action when physicians do not adhere to our ethical principles. We must preserve the art of medicine and not just the science. It has been said that "Modern man worships at the temple of science," but science tells us only what is possible, not what is right. Ethics and moral standards tell us what is right.

Rapidly advancing technology has hurt our image also, by taking some of the personal care out of the practice of medicine — we are not as close to our patients as we were years ago. Are we letting the science of medicine completely replace the art? It is up to us to preserve the art of medicine along with encouraging and supporting scientific advancements. We must never forget that there is an intensely personal relationship between the patient and his doctor. Moral attitudes of courtesy, belief, compassion, understanding and tender loving care are so fundamental to the best medical practice that they demand constant reiteration. A good doctor must possess knowledge, but he also must possess skills and compassion. Medicine should be practiced as a form of friendship. Let me repeat that. Medicine should be practiced as a form of friendship.

If we maintain and regularly improve our scientific knowledge, adhere to our stringent code of ethics, practice medicine as a form of friendship, and start policing our errant fellow practitioners, I believe we will regain the exalted position medicine has enjoyed for so many years.

I ask you, all members of the Mississippi State Medical Association, and especially those physicians in Mississippi who are not members of the Mississippi State Medical Association, to join with me in a year of introspection. Let us look inward and analyze our own ethical behavior, along with that of our colleagues. Let us not enter into a "brotherhood of silence" when a colleague strays, but rather let us renew our commitment to report professional misconduct. The incompetent and impaired physician must be rehabilitated or rid from the profession, just as the dishonest or unscrupulous physician must be disciplined. At the end of this coming year, let each of us look backward and be able to say "I have increased my medical knowledge, I have closely followed our ethical principles, and I have practiced medicine as a form of friendship — all to the benefit of my patients and society in general."

MSMA Membership Benefits

Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrative here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

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The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

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PRACTICE MANAGEMENT

Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics from CPT-IV coding to patient surveys. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

DEBT COLLECTION SERVICE

Based upon sponsorship by medical associations in many states, IC System is endorsed by MSMA to perform debt collection services for offices and clinics of member physicians. IC System has a proven national track record as a debt collection service. For further information call Davis Richards at MSMA.

TRAVEL PROGRAMS

Each year MSMA selects several outstanding travel opportunities provided by INTRAV, a highly respected travel organization specializing in group travel arrangements. INTRAV's "frequent traveler" program attests to the satisfaction of its clients. For further information call Kay Gatewood at MSMA.

Information Sources

MSMA and MSMA Diversified Services — 735 Riverside Drive, Jackson, MS 39202; 601-354-5433 or 800-898-0251 (In-State Watts)

Medical Assurance Company of MS — 735 Riverside Drive, Jackson, MS, 39202; 601-353-2000 or 800-325-4172 (In-State Watts)

MEDICAL ORGANIZATION

Dr. Nix Assumes Presidency of MSMA

Dr. J. Elmer Nix of Jackson was installed as 1990-91 president of the MSMA during closing ceremonies of the 122nd Annual Session. He succeeds Dr. J. Edward Hill of Hollandale.



A clinical assistant professor of orthopaedic surgery at the University School of Medicine in Jackson, Nix also privately practices orthopaedics in the Jackson area and is attending surgeon at the St. Dominic's, River Oaks, and Hinds General Hospitals. He completed his undergraduate study at the University of Mississippi and earned his M.D. at the Thomas Jefferson Medical College of Pennsylvania, Philadelphia.

Prior to his one-year term as MSMA president-elect, Dr. Nix served for nine years as the association's secretary-treasurer. He also is a delegate to the American Medical Association.

In addition to his duties with MSMA, Nix's professional affiliations include American Academy of Orthopaedic Surgeons, the Southern Orthopaedic Association, the Mid-American Orthopaedic Association and the Clinical Orthopaedic Society. He is also past president of the Mississippi Arthritis Foundation, the University of Mississippi School of Medicine Alumni Association, Mississippi Orthopaedic Society, and the North American Spine Society.

AMA Moves to New Chicago Headquarters

The staff of the AMA will be moving into leased space in a new headquarters building in Chicago, beginning August 16.

Most of the AMA staff will move over an 11-day period and all will be in their new offices by August 27. Then, the AMA's mailing address changes to 515 North State Street, Chicago 60610. The general office phone number becomes (312) 464-5000.

In 1985-86, the AMA undertook an extensive study to help the association decide what to do about its aging headquarters building, which was becoming increasingly more expensive to operate and maintain. The original building dates back to 1902, and there were several additions over the years. The decision to become the prime tenant in a developer's larger office building was identified as the fiscally sound solution.

Cocke Joins MSMA Staff As Communications Director

Ginger Cocke of Jackson joined the MSMA staff as Director of Communications in May. Her major responsibility will be Managing Editor of the Journal.



Cocke earned her B.S. degree in 1971 from Mississippi University for Women and her M.S. degree in Communications in 1989 from Mississippi College. For the past 13 years Cocke has been Communications Coordinator for another Mississippi association. She is a member and past president of the Public Relations Association of Mississippi, and a member of the Southern Public Relations Federation.

MSMA Members Receive Physician's Recognition Award

Ten MSMA members were named recipients of the AMA Physicians' Recognition Award during January and February. They are: Drs. Jim C. Barnett of Brookhaven, James D. Fly of Jackson, Henry E. Irby of Brandon, Daniel T. Keel of Brookhaven, Cirila L. Reyes of Waynesboro, Thomas R. Shaw of Lucedale, Elbert A. White of Corinth, Clyde R. Allen of Laurel, Jimmy E. Isbell of Meridian, and Pamela L. Jett of Vicksburg.

Physicians can receive the PRA certificate valid for one, two or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours of CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1.

MSMA Sponsors School Health Education Seminar



"School Health Education Equals A Healthy Future" was the theme of an MSMA-sponsored seminar April 26 at Jackson's Coliseum Ramada Inn. MSMA president J. Edward Hill, M.D., (center back) presided, along with Mrs. Eric (Nancy) Lindstrom, MSMAA president (left front). Among speakers were Anne Jordan, of the Mississippi State Department of Education (center front); Jim Harrell, deputy director, Office of Disease Prevention and Health Promotion, Department of Health and Human Services (right front); Don Sweeny, Michigan State Department of Health (left rear) and Ken Ferber, Acting President, National Center for Health Education.

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NEW MEMBERS

AMBROSEK, JEFFREY ALAN, Vicksburg. Born Ventura, CA, March 30, 1948; M.D., University of Texas Southwestern Medical School, Dallas, 1979; interned and pathology resident, Brooke Army Medical Central, TX, 1980-84; elected by West Mississippi Medical Society.

CARLYLE, BILL LEE, Jackson. Born Okinawa, Aug. 11, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and pediatric residency, University Medical Center, Jackson, MS, 1986-89; elected by Central Medical Society.

FARINA, JOSEPH W., JR., Meridian. Born Reading, PA, May 17, 1954; M.D., University of South Alabama Medical School, Mobile, 1984; interned and neurology residency, University of South Alabama Medical Center, Mobile, 1984-88; elected by East Mississippi Medical Society.

HADEN-WRIGHT, CYNTHIA L, Jackson. Born Laurel, MS, Sept. 27, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned, medicine residency and gastroenterology fellowship, University Medical Center, Jackson, MS, 1985-90; elected by Central Medical Society.

HARPER, WILLIAM B., Greenwood. Born Greenville, MS, March 10, 1960; D.O., West Virginia School of Osteopathic Medicine, Lewisburg, 1986; interned Hillcrest Hospital, Oklahoma City, OK, one year; family medicine residency, University of Alabama Branch, Selma, 1987-89; elected by Delta Medical Society.

HASEK, JOSEPH, Eupora. Born Camp Kilmer, NJ, May 5, 1947; M.D., Loyola University Stritch School of Medicine, Maywood, IL, 1977; interned, one year, City of Memphis Hospital, Memphis, TN; internal medicine residency, University of Tennessee, Memphis, 1980-81 and 1985-86; elected by North Central Medical Society.

HUDSON, JERRY LYNN, Hattiesburg. Born Morgan City, LA, Oct. 4, 1958; M.D., Louisiana State University School of Medicine, Shreveport, 1985; interned, one year, Lallie Kemp Charity Hospital, Independence, LA; pathology residency, Tulane Medical School, New Orleans, January 1986-June 1990; elected by South Mississippi Medical Society.

JOHNSON, SIDNEY ALBERT, JR., Jackson. Born Jackson, MS, Sept. 6, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned one year, University of Alabama-Birmingham; residency in radiation therapy, Bowman Gray School of Medicine, Winston-Salem, NC, 1987-90; elected by Central Medical Society.

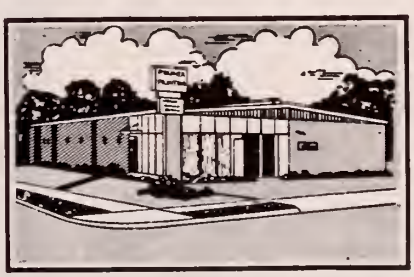
LONG, CECIL ALLEN, Jackson. Born Monroe, LA, Feb. 10, 1958; M.D., Louisiana State University School of Medicine, Shreveport, 1984; interned and ob-gyn residency, University of Arkansas Medical Center, Little Rock, 1984-88; reproductive endocrinology fellowship, Washington University, St. Louis, 1988-90; elected by Central Medical Society.

MCGUIRE, ROBERT ALTON, JR., Jackson. Born Guin, AL, Dec. 14, 1952; M.D., University of Alabama School of Medicine, Birmingham, 1979; interned, one year, Naval Hospital Portsmouth, VA; orthopedic surgery residency, same, 1981-85; fellowship — University of Miami, FL, 1985-86; elected by Central Medical Society.

PRUETT, J BRUCE, Laurel. Born Gainesboro, TN, March 5, 1951; M.D., University of Tennessee School of Medicine, Memphis, 1977; interned and

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general surgery residency, University of Tennessee Medical Center, Chattanooga, 1977-82; elected by South Mississippi Medical Society.

RICE, WILLIAM LOUIS, Hattiesburg. Born Tupelo, MS, Jan. 19, 1958; M.D., Vanderbilt University Medical School, Nashville, 1984; interned and orthopedic surgery residency, University of Wisconsin Hospitals & Clinics, Madison, 1984-89; elected by South Mississippi Medical Society.

ROBERTS, WILLIAM EGGERS, Keesler. Born Panama Canal Zone, May 4, 1948; M.D., University of Alabama School of Medicine, Birmingham, 1974; interned Malcolm Brow USAF Medical Center, Andrews AFB, M.D., one year; ob-gyn residency, USAF Medical Center, Keesler AFB, MS, 1975-79; fellowship in maternal-fetal medicine, University Medical Center, Jackson, MS, 1982-84; elected by Central Medical Society.

VAN WART, CHARLES A, Starkville. Born Dallas, TX, Nov. 10, 1934; M.D., Baylor College of Medicine, Houston, TX, 1961; interned, one year, Baylor, Houston; surgery residency University of California, San Francisco, 1966-67 and otolaryngology residency, same, 1968-70; elected by Prairie Medical Society.

WHITE, JOHN PAUL, Tupelo. Born Oxford, MS, April 17, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and medicine residency, Bowman Gray School of Medicine, Winston Salem, NC, 1986-89; elected by Northeast Mississippi Medical Society.

WOOD, GARY PHILLIP, McComb. Born Morrilton, AR, Dec. 24, 1940; M.D., University of Arkansas Medical School, Little Rock, 1965; interned, one year, Memorial Medical Center, Kansas City, MO; ob-gyn residency, Jewish Hospital, St. Louis, 1966-67 and University of Mississippi Medical Center, 1967-69; fellowship, University of Pennsylvania, Philadelphia; elected by South Central Medical Society.

DEATHS

DAVIS, FRANK M., Corinth. Born Booneville, MS, Aug. 23, 1902; M.D., Vanderbilt University School of Medicine, Nashville, 1930; interned and surgery residency, Cleveland City Hospital, Cleveland, OH, 1934-38; died April 16, 1990, age 88.

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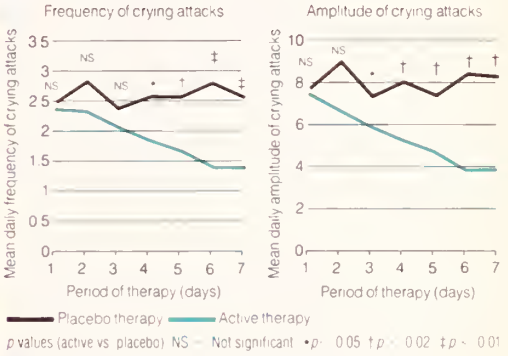
Family therapy for colic.

The excessive crying of colic puts a strain on the most loving family—and often on their physician as well. And whatever the cause of colic, one fact is clear:

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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant c... *Practitioner* 1988;232:508

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PERSONALS

T. J. Anderson of Laurel announces his retirement from family practice.

John R. Bise of Jackson has been recognized by the American Society for Colposcopy and Cervical Pathology for 20 years of active membership. He recently attended the group's biennial meeting in Washington, DC, and also attended the annual meeting of the American Society for Laser Medicine and Surgery in Nashville.

Richard Boronow of Jackson was guest speaker for the annual meeting of the Australian Society of Gynecologic Oncologists in Perth, Western Australia. He also gave the annual Norman Thornton Lecture at the University of Virginia in Charlottesville.

Milam S. Cotten of Hattiesburg recently participated in a Rotary International eye surgery mission to Jos, Nigeria for two weeks, during which time a ten-person team performed cataract extractions on 125 persons with mature cataracts.

Chris P. Ethridge announces the association of Mark T. Buchman in practice at Hand Surgery Associates of Jackson.

Joseph W. Farina, Jr. has associated with Rush Medical Group in Meridian for the practice of neurology and headache management.

Gretchen Frantz has associated with Baptist Memorial Hospital in Booneville in the practice of Pathology.

H. Allen Gersh of Hattiesburg has been certified by the American Board of Internal Medicine's Critical Care Group.

Bobby L. Graham and G. C. Stubblefield, Jr. have associated with Jackson Oncology Associates for the practice of hematology and oncology.

John C. Halbrook has associated with Internal Medicine Clinic of Meridian for the practice of oncology and hematology.

Charles A. Hollingshead of Laurel announces his retirement from the private practice of family medicine.

G. Eli Howell announces the accreditation of the Hattiesburg Plastic Surgery Clinic by the American Association for Accreditation of Ambulatory Plastic Surgery Facilities.

Calvin T. Hull of Jackson has been recognized for 20 years of active membership in the American Society for Colposcopy and Cervical Pathology.

Henry E. Irby announces the opening of his office for the private practice of physical medicine and rehabilitation with offices located in the Mississippi Methodist Hospital and Rehabilitation Center.

Joseph E. Johnston of Mt. Olive has been elected to the Executive Committee of the American Board of Family Physicians.

Deborah T. Lee of Clinton recently was elected to fellowship in the American Academy of Pediatrics. She announces the association of W. Richard Boyte in the practice of pediatrics at Clinton Children's Clinic.

William A. Long of Jackson spoke at a seminar sponsored by Vicksburg Clinic on "Today's Adolescent and His Problems."

Dean Lusted announces the opening of his office for the practice of family medicine in Carthage.



WILLIAM S. MAYO has associated with the Rayner Eye Clinic of Oxford for the practice of medical and surgical ophthalmology.

JEFFERSON C. MCKENNEY has associated with The Surgical Clinic of Biloxi for the practice of general and thoracic surgery.

J. P. MCLAURIN of Oxford has been recognized by the American Society for Colposcopy and Cervical Pathology for 20 years of active membership.

LYNN MCMAHAN of Hattiesburg gave presentations during the recent meeting of the American Society of Cataract and Refractive Surgery in Los Angeles.

W. T. OAKES of Amory was named Doctor of the Year for the third time by the Mississippi Society of the American Association of Medical Assistants.

CHARLES PARKMAN of Hattiesburg has been certified by the American Board of Internal Medicine's Critical Care Group.

J. S. PULLIAM of Greenville announces the association of ALLEN HALE THOMPSON for the practice of family and internal medicine.

ROGER H. REED of Biloxi was guest speaker at a meeting of Coast Counties Medical Assistants.

KELLY S. SEGARS, SR. of Iuka has been recertified as a fellow of the American Academy of Family Physicians.

VAN H. TEMPLE and DAVID J. GANDY announce the formation of Capital Orthopedic Clinic with offices at 348 Crossgates Boulevard in Brandon.

GRAYDEN A. TUBB of Fulton has been recertified as a fellow of the American Academy of Family Physicians.

ROBERT VOLLER, JR. of Columbus has been certified by the American Board of Anesthesiology.

CARL WELCH of Corinth has been elected chief of staff for Magnolia Hospital.

J. PAUL WHITE has associated with Internal Medicine Associates of Tupelo for the practice of internal medicine at 845 South Madison Street.

TOM WOOLDRIDGE of Tupelo spoke at the Family Practice Update at North Mississippi Medical Center and at the Miss-LA American College of Physicians meeting in Jackson.





Dr. Holwick outside of hospital where she practices as a civilian traumatologist.



Dr. Holwick in operating room at Letterman Army Medical Center.

JANN L. HOLWICK, M.D.

General and Trauma Surgeon.
Captain, U.S. Army Reserve.

EDUCATION University of Southern California, B.S.; University of California School of Medicine.

RESIDENCY Harbor General Hospital—UCLA Medical Center.

HOSPITAL AFFILIATIONS St. Luke Hospital; Huntington Memorial Hospital, Pasadena, California; Traumatologist, Arcadia Methodist Hospital, Arcadia, California.

OUTSTANDING ACHIEVEMENTS Borden Freshman Prize; Alpha Lambda Delta; Phi Beta Kappa; Phi Kappa Phi; Bovard Award; ALD Award; American Institute of Chemists Medal Award; Summa Cum Laude, University of California; Alpha Omega Alpha.

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References

1. USP DI Update, September/October 1988, p 120.
2. Br J Clin Pharmacol 1985;20:710-713.
3. Data on file, Lilly Research Laboratories.
4. Scand J Gastroenterol 1987;22(suppl 136):61-70.
5. Am J Gastroenterol 1989;84:769-774.

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Indications and Usage: 1. *Active duodenal ulcer* – for up to eight weeks of treatment. Most patients heal within four weeks.

2. *Maintenance therapy* – for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than one year are not known.

Contraindication: Known hypersensitivity to the drug. Use with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy.

Drug Interactions – No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers – Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events was due to the drug.

Hepatic – Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to three times the upper limit of normal, however, did not significantly differ from that in placebo patients. Hepatitis and jaundice have been reported. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic – Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Because cross-sensitivity among this class has been observed, H_2-receptor antagonists should not be administered to those with a history of hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

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Additional information available to the profession on request.

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Medico-Legal Brief

Psychiatrists Not Liable For Murders by Ex-Patient

Psychiatrists who treated a mental patient could not be held liable for the patient's subsequent murder of two members of the general public, a Georgia appellate court ruled.

In September 1978, the patient was committed to a state hospital after being found not guilty of murder by reason of insanity. He was later released when the court found that he did not meet the criteria for civil commitment.

In March 1980, the patient was admitted as a voluntary patient to another hospital. After he left the hospital in April, he allegedly threatened to kill his former wife. A psychiatrist who examined him found that he was not dangerous to himself or others. In August, he was arrested on charges of making terroristic threats against his former wife. He was admitted to the hospital and treated before he was found competent to stand trial. He was acquitted on the terroristic threats charge and released from custody in April 1981. In June, he murdered a husband and wife.

The children of the murdered couple brought an action against seven psychiatrists who had treated or had administrative contact with the patient. They sought damages for alleged negligence in allowing the patient to be released and failing to exercise proper control over him and in failing to warn the victims of his release. The trial court granted summary judgment in favor of some of the psychiatrists and against others.

On appeal, the court said that there was no evidence that the victims were related to the patient or were even acquainted with him. The only specific person the patient expressed hostilities toward was his former wife, who knew of the danger. The court found that the psychiatrists could not be held liable for failure to warn members of the general public of generalized threats made by the patient. The court affirmed the summary judgment in favor of four of the psychiatrists and reversed the trial court's judgment as to the other three.— *Jacobs v. Taylor,* 379 S.E.2d563 (Ga.Ct.of App., Feb.17,1989; rehearing denied, March 1, 1989; cert. denied, Ga.Sup.Ct., April 6, 1989)

RECOLLECTIONS

(Editor's Note: For those too young to remember the days before Medicare reimbursement, FTC edicts and no house calls — this is the way it used to be. From the "Business Minutes" of the Holmes County Community Hospital of July 19, 1957 . . . The Holmes County Community Hospital Medical Staff.)

The Holmes County Community Hospital Medical Staff held its meeting in the dining hall of the hospital Friday night at 8:30 P.M. this July 19, 1957. All active staff members were present. Dr. P. B. Brumby, Chief of Staff, conducted the meeting which was primarily called at this time to accept three new physicians to the medical staff and secondly, to agree on changes in professional charges.

The motion to accept Dr. J. D. Mitchell and Dr. J. E. Roberts of Lexington and Dr. A. B. Cobb of Pickens to the staff was approved. Dr. Brumby informed the three members that he would introduce them for membership at the next meeting of the North Central Medical Society which in turn would entitle them to State Medical Association and American Medical Association membership.

The second order of business concerned fees, and listed below are the new charges agreed upon by Drs. Brumby, Cobb, Gowan, Mitchell and Roberts. It was also agreed by all that these fees would go into effect as of July 20, 1957:

1. Office call $3.00
2. House call .....$4.00 (inside city limits)
3. Hospital visits $3.00
4. Injections $1.00
   (these include the usual routine such as penicillin, combiotic, vitamins, hormones, etc. Special injections which are higher in price to the physician such as ACTH, Cortisone, etc., will be higher according to the physician's own judgement.
5. House calls (County) ..... $4.00 plus 50¢ per mile (one way) plus charges for injections
6. OB's ..... $50.00 (Multipara Normal)

BOOK REVIEW

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. The Media Institute, Washington, DC. 1989. $12.95.

Journalists and scientists are both truth seekers, but the worlds in which they operate are so different that when journalists cover scientific topics, good reporting is hardly guaranteed. This book, which is a collection of six essays by knowledgeable and well-known science reporters, is aimed at helping us to better understand the reporting of health risks, especially environmental health risks, so that better communication can take place between scientists and journalists. As scientists, we physicians perhaps understand better than most that the public comes to understand science and technology less through direct experience than through the filter of journalism. Newspapers, popular magazines and television are their only contact with what is going on in technical fields. Science writers then, in effect, become brokers who frame social reality and shape the public consciousness about science.

This book, which was published by the Media Institute of Washington, D.C. in cooperation with the American Medical Association, was edited by Mike Moore who is editor of *The Quill,* the monthly magazine of the Society of Professional Journalists. Its approach is to attempt to fill the void between science and scientific reporting. As physicians we are perhaps best prepared to read between the lines in scientific reporting and interpret for ourselves, our families and our patients. It is from this approach that this book deserves our attention and our respect.

We must keep in mind that the chief objective of science is the pursuit of truth. However, the "truth" may change as new data are assembled and as new scientific models are developed to explain the new data. It should also not be forgotten that vested interests of the public relations personnel frequently come into play in the interpretation of newly available data. The task of the science writer is to provide sufficient information to allow the reader, or, in our case, our patients, to make an intelligent decision on controversial issues.

Consider the powerful arguments both for and against nuclear power that we have faced in the news media over the past twenty years. In the seventies, anti-nuclear power activists who found many allies among the ranks of science reporters succeeded in generating such fear of nuclear power that nuclear technology was humbled and is currently on the verge of being abandoned in the United States. However, in the haste of the activists to condemn nuclear power they generally overlooked the dangers from air pollution caused by power generation stations that burn coal and oil. Though the problem of acid rain is still far from settled, it is reasonably safe to assume that no nuclear power plant has ever contributed to this problem. Certainly, nuclear power plants do not worsen the greenhouse effect nor do they pollute the atmosphere with sulfur dioxide and carbon dioxide. Currently, no person has ever been killed by radiation from a commercial nuclear power plant in the United States. However, air pollution from plants using fossil fuels are conservatively responsible for the premature deaths of perhaps 50,000 Americans each year. It is obvious that science reporting regarding environmental health risks can be slanted even from this brief appraisal of only one problem. Additional health risk controversies covered in this very interesting book include AIDS, tobacco, dioxin, toxic dumps, and Agent Orange.

This excellent manual detailing the interrelated activities of health professionals and science reporters is recommended for anyone interested in the problems and misconceptions of health risk reporting. Information is power, and because of that doctors and scientists should be on guard against activists who often try to control it, or shape it, or otherwise use it to promote their private goals, or to serve a particular cause or ideology. I believe that this book is excellent preparation for making us aware of this problem and at the same time teaching us how to deal with it in an intelligent manner.

MARTIN L. DALTON, M.D.
Jackson, MS



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VASOTEC®

(ENALAPRIL MALEATE | MSD)

VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General Impaired Renal Function* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia Elevated serum potassium (>5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients

Angioedema Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions

Hypotension: Patients on Diuretic Therapy Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium, and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy – Category C There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); pulmonary embolism and infarction, pulmonary edema, rhythm disturbances, atrial fibrillation, palpitation

Digestive Ileus, pancreatitis, hepatitis (hepatocellular or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth

Musculoskeletal Muscle cramps

Nervous/Psychiatric Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, hyperhidrosis

Special Senses Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgias/arthritis, myalgias, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

Angioedema Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes Hyperkalemia (see PRECAUTIONS), hyponatremia

Creatinine, Blood Urea Nitrogen In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown) In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

Liver Function Tests Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Patients with Heart Failure and Renal Impairment or Hyponatremia In patients with heart failure who have hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

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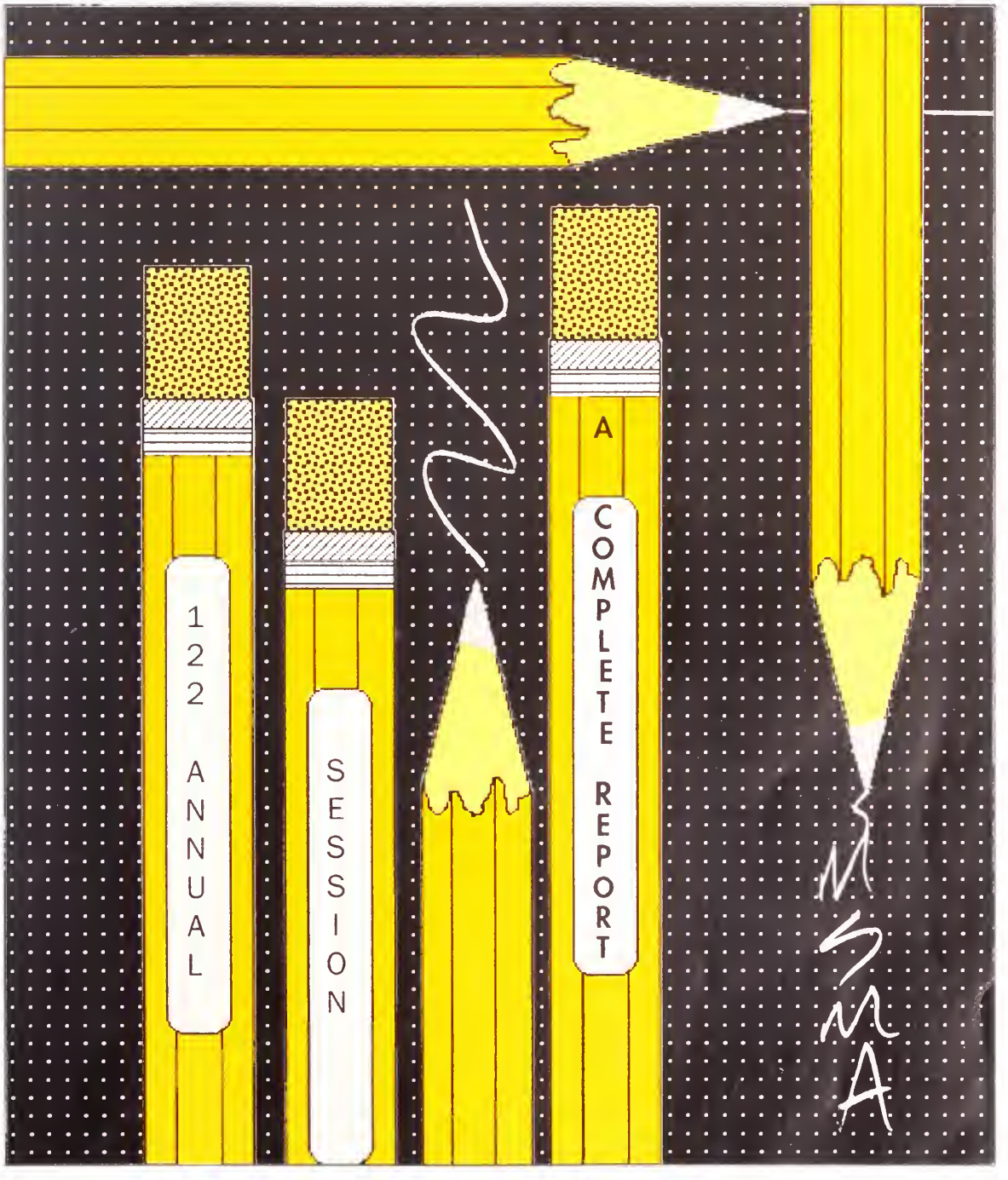
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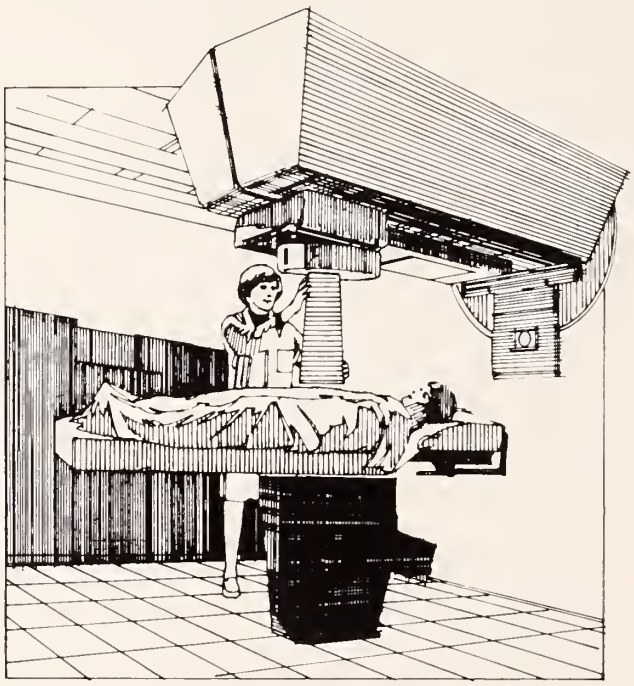
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NEWSLETTER

July 1990

Dear Doctor:

The 122nd Annual Session was most successful with excellent speakers in the medicine and surgery plenary sessions. Many key issues were addressed in this year's House of Delegates. Attendance was extremely good with a total of 691 registered. There were 313 M.D. members, 13 guest M.D.'s, 26 medical students, 34 guest, 85 auxiliary members, 209 exhibitors and 11 MSMA staff members present.

Dr. J. Elmer Nix of Jackson was inaugurated as MSMA's 1990-91 president and Dr. James L. Waites of Laurel was elected president-elect. Serving as officers and members of the Board of Trustees during this association year will be: Dr. Lee H. Rogers, Tupelo, chairman; Dr. Mal G. Morgan, Natchez, vice-chairman; Dr. Fred L. McMillian, Jackson, secretary; Dr. Walter H. Rose, Indianola; Dr. Stanley Hartness, Kosciusko; Dr. John P. Lee, Forrest; Dr. Stanley A. Wade, Jr., Meridian; Dr. Eric E. Lindstrom, Laurel; and Dr. David L. Clippinger, Gulfport.

Due to the efforts of AMA and others, Medicare has informed all its carriers who previously permitted a physician to bill for services provided by a substituting colleague to continue that practice. Travelers Medicare of Mississippi is one of these carriers.

Mississippi is among the first to benefit from a telephone hotline to the AMA's Member Service Center. The hotline allows you to call the AMA toll-free to find out information, express an opinion or register a complaint. The service is designed to separate members calls from other calls, so yours get priority service. The Hotline number is 1-800-AMA-3211.

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References

1. *USP DI Update, September/October 1988, p 120.*
2. *Br J Clin Pharmacol 1985;20:710-713.*
3. *Data on file, Lilly Research Laboratories.*
4. *Scand J Gastroenterol 1987;22(suppl 136):61-70.*
5. *Am J Gastroenterol 1989;84:769-774.*

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Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers – Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events was due to the drug.

Hepatic – Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to three times the upper limit of normal, however, did not significantly differ from that in placebo patients. Hepatitis and jaundice have been reported. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic – Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Because cross-sensitivity among this class has been observed, H_2-receptor antagonists should not be administered to those with a history of hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

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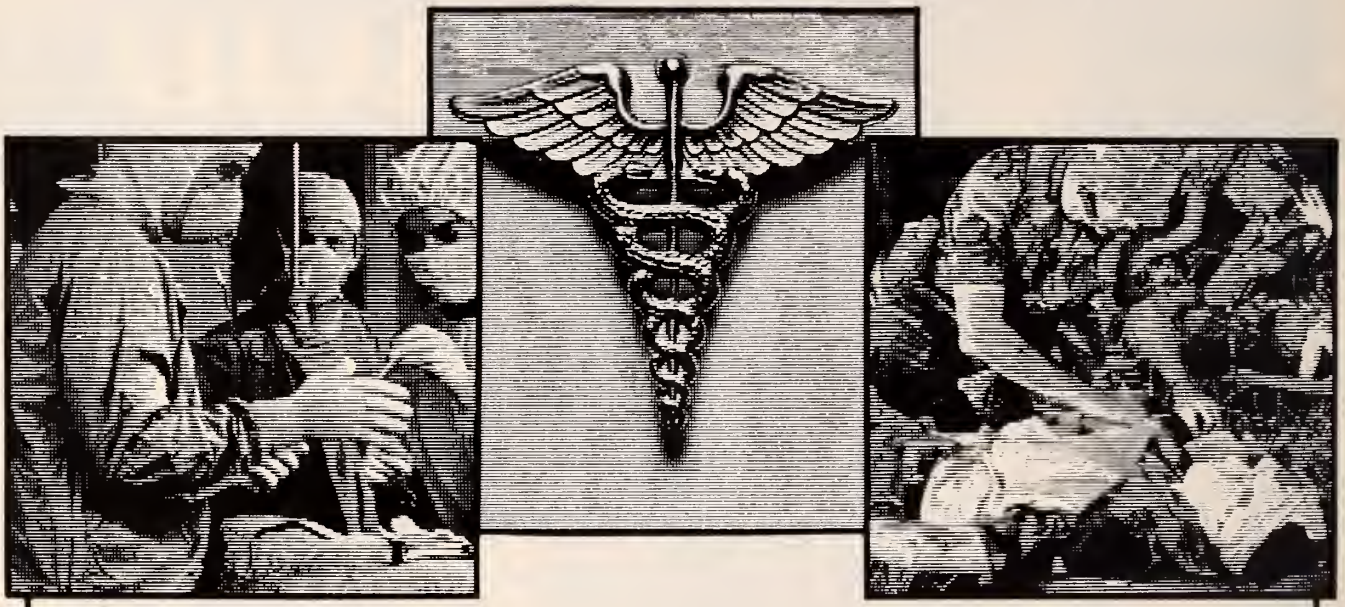
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DATELINE

Smith Receives MSMA's Community Service Award

Jackson, MS - Dr. Robert Smith of Jackson was the 1990 Mississippi State Medical Association Community Service Award Recipient during the 122nd Annual Session. Smith, a Terry native, was commended by MSMA's President Ed Hill for service not only in his community but also for his service to our state and nation.

Dramatic Results When Very Old "Pump Iron"

Chicago, IL - Start a group of The frail 90-year-olds on a regimen of high-intensity weight training and they'll respond with big jumps in muscle strength, size and mobility, concludes a study in the June 13, Journal of the American Medical Association. These changes, however, are not maintained when training ends.

AMA Releases New Risk Management Guide

Lihue, HA - An 18 month project by the AMA and more than 30 specialty societies has culminated in the release of the nations first cross-specialty risk management guide. The guide, officially known as Risk Management Principles & Commentaries for the Medical Office, is available from the AMA at a cost of $5.00 per single copy.

Onset of Mental Disorders Found at Younger Age

Chicago, IL - Phobias, major depression, and alcohol and other drug dependence affect young men and women earlier in their lives than previously believed, according to research in June's Archives of General Psychiatry. About 12 percent of the nation's youth or 7.5 million children and adolescents have a mental disorder.

Proposal to Cut Medicaid Drug Costs

Washington, DC - Sen. David Pryor (D, Ark.) recently introduced legislation designed to reduce the amount Medicaid programs pay for prescription drugs. This issue promises to be one of the most hotly contested health issues of Capitol Hill this summer. The bill would require state Medicaid officials to negotiate with drug companies on price.



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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
July 1990, Volume XXXI, Number 7

ORIGINAL PAPERS

Endopyelotomy for the Management of Ureteropelvic Junction Obstruction

RONALD P. KNOBLOCH, M.D.
Jackson, Mississippi

PERCUTANEOUS ACCESS to the kidneys initially was developed to relieve upper urinary tract obstruction. Over the last decade advances in technique and instrumentation have allowed performance of intrarenal surgical procedures, most commonly the removal of renal calculi. Procedures on the upper ureter were also possible through a percutaneous approach.

Ureteropelvic junction obstruction may result from a primary process such as a congenital obstruction or a secondary process related to calculi or failed operations. These have been corrected by a variety of surgical techniques with excellent success. These repairs have necessitated open surgical procedures, some of which may be extremely difficult. Endopyelotomy, or the closed endoscopic manipulation of the ureteropelvic junction, developed as a natural extension of other percutaneous surgical procedures. The ureteropelvic junction is usually readily accessible percutaneously and its incision allows a less extensive and invasive procedure than an open operation.

Technique

The technique for endopyelotomy has been described by Smith and associates.[1,2] The ureteropelvic junction is approached through a mid or upper caliceal percutaneous nephrostomy tract. A guide wire is placed through the ureteropelvic junction usually in an antegrade fashion although occasionally retrograde passage of a wire is necessary. After dilation of the nephrostomy tract, a cold-knife direct vision endopyelotome is introduced and incision on the posterolateral wall of the ureter is made until periureteral fat is visible. This area of the ureter is chosen to avoid aberrant vessels. An electrode is not used because of the possibility of thermal injury and re-stenosis.[3]

After adequate incision is obtained, the ureteropelvic junction is stented with an endopyelotomy catheter which is 12F through the ureteropelvic junction and tapers to 7F in the ureter and bladder. a nephrostomy tube is also placed and the procedure is terminated. A nephrostogram is obtained in 48 to 72 hours, and the nephrostomy tube is removed if no extravasation is seen. The stent is clamped and left *in situ* for six weeks at which time a pyeloureterogram through the stent is done. If the lumen is adequate at this time, the stent is removed. A follow up IVP is obtained three months after the procedure.[4]

Discussion and Results

Endopyelotomy evolved as an extension of percutaneous intrarenal surgical techniques developed

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in the mid-1970's. The technique is an endoscopic modification of the intubated ureterotomy described by Davis in 1943.[5] Oppenheimer and Hinman reported that ureteral healing relied on smooth muscle regeneration to enlarge the ureteral lumen after incision and stenting.[6] This principle explains the basis for success after ureterotomy and, by extension, endopyelotomy.

Initially endopyelotomy was used to deal with obstruction of the ureteropelvic junction associated with pyeloplasty failures and calculi. Success rates of 85-88% have been achieved in this group of patients. Further experience has suggested that management of primary ureteropelvic junction obstruction is also possible. Indeed, similar success of 80 to 87.7% have been reported in these patients.

Fourteen percent of patients required secondary open procedures due to endopyelotomy failure (11%) and complications of bleeding and ureteral injury (3%). [4, 7]

This procedure has the advantage over open surgical procedures in a shorter hospital stay (average of three days less) with a savings of about 20%. Narcotic analgesia requirements are less after endopyelotomy than with open surgery. Recovery time is about three weeks shorter with endopyelotomy with some patients returning to full activity in as little as one week after discharge. Should a subsequent operation be required, the posterolateral incision leaves the periureteral fat and ureteral blood supply undisturbed and does not complicate later open repair.[1, 8]

This is not a procedure for all cases of ureteropelvic junction obstruction. Patients with aberrant lower pole vessels, long stenotic segments of ureter, the presence of retroperitoneal fibrosis, and high ureteral insertions are not good candidates for endopyelotomy. Patients with a massively dilated renal pelvis from ureteropelvic junction obstruction may need tapering of the pelvis. This cannot be done endoscopically, and therefore these patients are also not good candidates for endopyelotomy.[1, 7]

Summary

Endourological advances have given rise to endopyelotomy as a means of correcting ureteropelvic junction obstruction either primary or secondary. Endopyelotomy can be accomplished with a shorter hospital stay and recuperation period as well as less morbidity than open procedures. It seems particularly useful in correcting ureteropelvic junction obstruction associated with renal calculi and failed surgical procedures. Initial reports on its use as treatment of primary obstruction are also encouraging. Based on long term results of others and our limited experience, this procedure seems to be a useful addition to the urological armamentarium for treatment of ureteropelvic junction obstruction.

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Pathologic Findings in Brains of Patients With Focal Epileptic Seizures Who Had a Craniotomy Procedure

A.S. WEE, M.D.
A.D. PARENT, M.D. and
R.A. ASHLEY, B.S.
Jackson, Mississippi

This report reviews the pathologic findings in brains of 12 patients with focal epileptic seizures who had a craniotomy procedure. A majority of patients (seven) had either a cerebral neoplasm or a developmental abnormality (tuberous sclerosis and hamartoma), and these were found in six of the nine patients with chronic and intractable seizures. Four patients had cortical gliosis or scarring, and one had a bacterial brain abscess. Ten patients had a visible focal structural lesion during cranial imaging procedures, and in two instances, the MRI study was more sensitive than the CT in detecting a cerebral lesion.

EPILEPTIC SEIZURES may be broadly classified as focal and generalized.[1, 2] A seizure is focal when there is clinical or electrophysiologic evidence that the epileptic activity is localized to, or originated initially from a limited portion of the brain usually in the cerebral cortex. Otherwise, it is generalized. A focal or partial seizure may remain localized or become secondarily generalized.

Because a focal seizure connotes a localized brain dysfunction, a structural brain lesion is more likely to be present in patients with this type of seizure compared to those with a generalized seizure. In this paper, we report the pathologic findings in brains of patients with focal seizures who had a craniotomy procedure.

Patients and Methods

Between January 1985 and April 1989, we reviewed the medical records of patients with a focal seizure disorder who had a neurosurgical procedure done at the University of Mississippi Medical Center. The surgeries were performed to determine the nature of the cerebral lesions found during cranial imaging studies and for the control of seizures. There were 12 such patients (six males and six females). These patients had different types of focal epileptic seizures (see Table 1). With the exception of patients G, I, and J who had a recent onset of the seizures (a few days to six months), the remainder were chronic patients who had an epileptic disorder for a mean duration of 9.7 years (S.D. = 6.8) before coming to surgery. A majority of these epileptic patients had poorly controlled seizures and were refractory to medical therapy. All patients had computerized tomographic (CT) scans of the head and multiple preoperative scalp electroencephalograms (EEGs). Magnetic resonance imaging (MRI) of the brain was also performed in all but two patients. In one patient (A), the MRI procedure was not available at the time. In another patient (G), who had a depressed skull fracture, the MRI procedure was not indicated. Intracarotid sodium amobarbital (Wada's) test[3] was performed in the majority of patients to determine cerebral dominance for language and memory. During surgery, all patients had

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surface electrocorticography to delineate the epileptogenic focus. A depth EEG recording was done in one patient (B).

During craniotomy, five patients had a temporal lobectomy, four had a limited cortical resection (corticectomy), one had a parieto-occipital lobe subtotal resection, one had an evacuation of a cerebral abscess, and one had a cranioplasty procedure for a depressed skull fracture.

Pathologic findings were determined in 11 patients from permanent microscopic slide sections of brain tissues. In one patient (G), no cerebral tissue specimen was obtained for histopathology; the cerebral cortex was visually inspected during the cranioplasty procedure.

Results

All patients, except for two, had a visible focal structural abnormality during cranial CT or MRI studies prior to surgery (see Table 1). In those with a focal cerebral lesion, the location of the abnormality was consistent with the clinical presentation of the seizure and preoperative EEG abnormalities. Surgery was performed in these patients to determine the nature of the cerebral lesion as well as for control of the seizures. The patients (A and D) without a visible structural lesion during the imaging procedures were having frequent partial motor seizures ranging from 5 to 35 episodes a day with a postictal hemiparesis. Local excision of the cerebral cortex (corticectomy) in these two patients was performed based upon functional localization of the abnormal brain electrical activity. The electrophysiologic studies included preoperative EEG localization of the epileptogenic focus and electrical seizures, and electrocorticographic mapping of the seizure focus during surgery. Thus, in these two patients, the surgery was performed purely for control of seizures.

During pathologic examination of brain tissues, the majority of patients (seven) had either a neoplasm (usually of a low-grade nature) or a developmental abnormality (hamartoma and tuberous sclerosis). Four patients had cortical scarring or gliosis. In one case (patient G), this resulted from an old trauma to the head (hammer blow). In another case (patient B), there was severe hippocampal atrophy and gliosis (mesio-temporal sclerosis). In the remaining two cases (patients A and D), no etiology was found to explain the cortical gliosis. Finally, in the whole group, there was one patient with a bacterial cerebral abscess.

Discussion

In this relatively small series of 12 patients with focal epileptic seizures, a majority (seven) was found during craniotomy to have either a neoplasm or a developmental anomaly (hamartoma and tuberous sclerosis). These abnormalities were present in six of the nine patients with chronic seizure disorder.

TABLE 1

SUMMARY OF FINDINGS IN 12 PATIENTS WITH FOCAL SEIZURES WHO HAD A NEUROSURGICAL PROCEDURE

Patient	*Age (yr)*	*Seizure Type*	*CT/MR Scans*	*Pathology*
A	6	L focal motor	no abnormality (CT)	cortical gliosis
B	13	complex partial	R mesio-temporal lesion (CT & MR)	severe hippocampal atrophy and gliosis
C	7	R focal motor with generalization; staring spells	L frontal lesion (MR); CT = negative	tuberous sclerosis
D	5	R focal motor	no abnormality (CT & MR)	cortical gliosis
E	16	L focal motor	R fronto-parietal lesion (MR); CT = negative	tuberous sclerosis
F	15	heading turning to R; R focal motor	L parieto-occipital cystic lesion (CT & MR)	mixed, oligodendroglioma and astrocytoma
G	21	visual aura; head turning to R with generalization	L parieto-occipital depressed skull fracture (CT)	cortical scar adherent to inner surface of dura
H	8	complex partial	R mesio-temporal lesion (CT & MR)	ganglioglioma
I	13	secondarily generalized	R temporal cystic lesion (CT & MR)	cystic fibrillary astrocytoma, grade II
J	2	L focal motor	R frontal lesion (CT & MR)	bacterial abscess
K	20	complex partial	R medial temporal cystic lesion (MR); past CT = negative	cerebral hamartoma
L	27	complex partial	L temporal lobe lesion (CT & MR)	mixed, oligodendroglioma and astrocytoma

CT = computerized tomography; MR = magnetic resonance
L = left, R = right

The two patients with tuberous sclerosis had no known family history of this disorder and did not have significant cutaneous stigmata of the disease; the cerebral lesion was detected by MRI and not by CT scan. Thus, it appears that MRI may be a more sensitive procedure than CT in detecting a cerebral lesion in certain individuals being evaluated for focal seizures. In a recent report of 23 patients with intractable epilepsy,[4] it was found that MRI was superior to CT scan in detecting the cerebral neoplasms in some of the patients. A cranial MRI study seems to be reasonably indicated as part of the workup in a person with focal epilepsy. Developmental cerebral abnormalities may be revealed by this procedure. Also, slow-growing cerebral neoplasms may be detected early, and surgical extirpation of a tumor will not only arrest its growth but might also provide better control of the seizures.

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Radiological Seminar CCXLVI: The Bird's Nest Inferior Vena Cava Filter

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Jackson, Mississippi

RECENT DESIGN ADVANCES have made possible the percutaneous placement of inferior vena cava filters utilizing smaller introductory sheaths. As a result, frequently these filters can be placed by a vascular radiologist rather than a surgeon in the operating room. One such inferior vena cava filter which lends itself well to percutaneous placement by the radiologist is the bird's nest filter. Herein, we present a case of a patient in whom a bird's nest vena cava filter was placed.

Case Report

A 50-year-old woman was being hospitalized for recurrent vaginal carcinoma with associated ureteral obstruction. During her hospital stay, she developed a clinical diagnosis of acute deep venous thrombosis involving her right lower extremity. Anticoagulant therapy was avoided in this patient because of a recent intracerebral hemorrhage. Because the woman was believed to be at significant risk for pulmonary emboli, vascular radiology was consulted for placement of a bird's nest vena cava filter.

Initially, an inferior venacavagram was performed to establish the size and anatomy of the inferior vena cava, including the location of the renal veins. A 12 French introducing sheath was then advanced into the inferior vena cava from the left femoral vein approach. The bird's nest vena cava filter was then deployed through this sheath in an infrarenal location in the inferior vena cava (see Figure 1).

Discussion

Inferior vena cava filters are designed with the purpose of preventing pulmonary embolic disease by means of filtering or trapping embolic material from the flowing blood in the inferior vena cava. Vena cava filters are indicated in patients with pulmonary thromboembolism in whom anticoagulation therapy is contraindicated or in whom anticoagulation has failed to prevent recurrent emboli. These filters may also be placed in patients who are believed to be at high risk of pulmonary thromboembolism.

Several designs of inferior vena cava filters for the prevention of migration of emboli are currently available or are in clinical trials.[1, 2, 3] We report recent placement of a "bird's nest" IVC filter at UMC. The bird's nest inferior vena cava filter is constructed of four stainless steel wires, each of which is 25cm long and 0.18mm in diameter. The wires are preshaped with many short-radius bends. At each end the fine wires are attached to struts for fixation to the wall of the IVC. The filter is preloaded into a 12F catheter and placed via a transcutaneous femoral or jugular vein approach. Infrarenal positioning of the filter is generally preferable, but suprarenal positioning may also be acceptable due to the low rate of caval thrombosis. When in place, the bird's nest filter produces a criss-crossing maze of 100cm of 0.18mm wires over an average length of 7cm of the IVC (see Figure 2).[4]

The bird's nest vena cava filter has several advantages over the popular Kimray-Greenfield filter. The bird's nest filter is placed through a 12 French introducing catheter as opposed to the 24 French introducing sheath required by the Greenfield filter. This allows for easier placement by the vascular radiologist, and the smaller introducer size is associated with a decreased incidence of femoral vein thrombosis.[4] An additional advantage of the bird's nest filter is that its clot trapping ability is not diminished by its orientation within the inferior vena cava; whereas the efficiency of the Greenfield filter

Sponsored by the Mississippi Radiological Society. From the Department of Radiology, University Medical Center, Jackson, MS.



Figure 1. Inferior vena cavagram (left) demonstrates normal appearing IVC. Inflow of unopacified blood from left renal vein is seen at level of pedicle of L2 vertebra. Bird's nest filter is placed in an infrarenal location (right). Note that only the struts can be easily seen on plain radiographs.

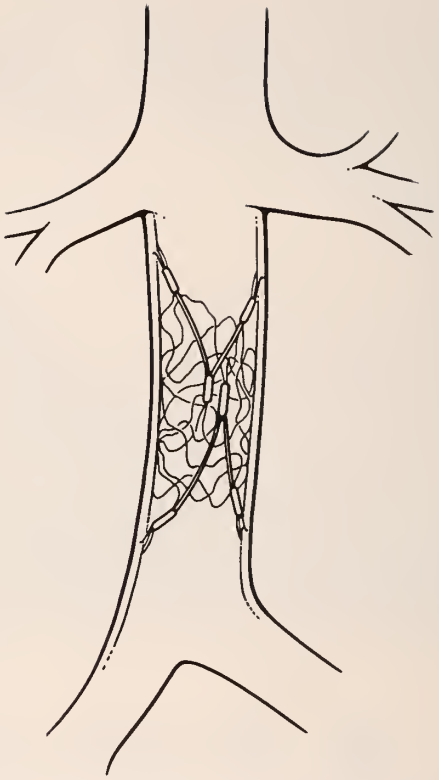


Figure 2. Diagrammatic illustration of a bird's nest inferior vena cava filter in an infrarenal location.

in trapping clot does decrease when it lies in a tilted orientation within the cava.[1, 5] In a recent in vitro study, virtually 100% of clots greater than 3mm in diameter were trapped by the bird's nest filter, and 70% of clots 2-3mm were trapped.[1] In the same study, the Greenfield filter was also very effective in trapping large clots if it was not tilted, but it allowed passage of 90%-100% of small clots. In the event of an eccentric or tilted position of the Greenfield filter, only 20% of all clots were trapped.[1] Both the bird's nest filter and the Greenfield filter are associated with a low incidence (less than 3%) of inferior vena cava thrombosis.[4] The incidence of clinically suspected recurrent pulmonary thromboembolism after placement of the bird's nest has been reported to be 2.9% in one large series, and this compares favorably with prior reports on the Greenfield filter.[4]

Many new types and designs of inferior vena cava filters are currently undergoing clinical trials, and may eventually make the current bird's nest and Greenfield filter obsolete. However, experience with the current design of the bird's nest filter indicates that it is an effective caval filter which can be easily placed by an experienced vascular radiologist.

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THE PRESIDENT'S PAGE

J. ELMER NIX, M.D.

Knowledge and Competency in Medicine

EDUCATION is the cornerstone of medicine. Physicians, probably more than any other group of professionals, know just how important education is. We all burned a lot of midnight oil to make those A's which enabled us to go to medical school; and then we got down to some really serious studying and education. After that we continued our education with additional years in residency education and we then educated ourselves for those Board examinations. The vast majority of us continue to take continuing medical education courses on a regular basis, just as we continue to read the medical journals, attend scientific meetings and seminars, take mini Fellowships, view educational videotapes, participate in computerized educational programs, etc. There has been and is a knowledge explosion in medicine and we all have to devote a significant amount of time to "keep up" with advances in our specialty fields.

Unfortunately, there are some physicians who do not "remain current" in their medical knowledge and these few are creating problems for all of us. At this time Rep. Fortney "Pete" Stark (D-Calif.) has introduced a bill in Congress (H.R. 4464), Medicare Physician Qualification Act of 1990. This bill would require all physicians who treat Medicare patients to take a recertifying exam at least every seven years, to prove their competence. Mr. Stark states, "Most doctors are competent. Many are not. Patients have the right to know if their doctors are competent." I am pleased that Mr. Stark is concerned and is calling attention to the quality of care that Medicare patients are receiving. We want the best quality for our Medicare patients but I believe physicians can evaluate physician competence better than the federal government. Rep. Stark's proposal will be very expensive and a time consuming (for the M.D.) method of evaluating one's medical knowledge but it certainly will not evaluate one's competence.

For once I do agree with Rep. Stark — on the first and last sentences of the above quotation. However, I have serious doubts that an examination prepared by the federal government will test anyone's competence. It might test one's knowledge about medicine, but just knowing something, does not mean that one

(Continued on page 227)

EDITORIALS

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Resolutions Call for Controlling Smoking

At the 122nd Annual Session of the Mississippi State Medical Association, resolutions calling for a cooperative effort by the Mississippi State Medical Association and other agencies to prevent cigarette smoking by young people were discussed favorably in the reference committees and passed by the House of Delegates. This beginning effort by organized medicine to solve a major health problem is long overdue. Hopefully, this action, in concert with similar action by the Attorney General and other National bodies, will be productive in bringing to a halt the enormous waste in dollars and human lives brought on by use of this addictive substance.

The resolutions called for focusing attention at controlling smoking by youths. Hopefully, this can be accomplished by controlling access and by removing peer pressure as the leading force driving young people to smoke. To accomplish this will require strong support and active participation by organized medicine in Mississippi. We must strongly urge the State Legislature to pass the measures requested by the resolution. This will be no easy task but the results of not accepting this challenge are so devastating and expensive that they are no longer acceptable to medicine and society in general.

MYRON W. LOCKEY, M.D.
Editor

PRESIDENT'S PAGE

(Continued from page 226)

properly uses that knowledge. Observation by peers is necessary to determine a physician's competence. This of course must be a fair evaluation by peers. Only doctors truly know how to evaluate the competency of other doctors and this evaluation will have to be done on a specialty and local basis — not by some physician sitting in an office in Washington, D.C., with twenty years of bureaucratic experience but no experience in the medical trenches.

There are twenty-three medical certifying boards (ABMS) and seventeen of these now issue Time Limited Certificates for periods of seven to ten years. Medicine is already meeting the goal of having physicians periodically demonstrate their qualifications via medical knowledge testing. To determine competence, however, we must add another ingredient — peer review. This is being done by most of us and to most of us every day — through observation by our colleagues who refer patients to us, get referrals from us, and by hospital peer review committees along with our own Mississippi Foundation for Medical Care. We all know who the competent and incompetent physicians are in our areas.

Unfortunately, we have sometimes fallen short in "blowing the whistle" on those who are incompetent. We are all fearful of violating anti-trust laws and we must constantly remain aware of those, but we must also do a better job of policing our own ranks. Thirty-three states have requirements for a certain amount of continuing medical education over a prescribed period of time. We have no such requirement in Mississippi. We have an obligation to assure the public that Mississippi doctors continue to practice good medicine.

I have no doubts about the overall quality of medicine in Mississippi. I have had first hand experience with that for twenty-seven years. However, I do have some very strong doubts about the competency of a few doctors in our state. I suggest that we show the public we are doing something positive toward "physician maintenance of competency" by setting up some standards or guidelines for all Mississippi physicians to follow. It is probable that, if we have an appropriate mechanism in place, we will be "grandfathered" and thus not be subjected to whatever Mr. Stark gets through Congress. If my competency is to be evaluated, I want the evaluator to be one of my peers, not the federal government. A modest proposal to try to avoid a radical federal "solution."

LETTERS

To the Editors and Members of the MSMA:

Thanks so much for your sponsorship of the Virginia Stancil Tolbert award that recently was presented to me. In some sense I do not feel quite worthy of such an honor but I can certainly strive. The cash prize is very handy also.

Thanks, too, for the work you guys do in keeping medicine an enjoyable profession to pursue. From the student point-of-view, this association is tops as a professional organization. I very much look forward to further involvement with the MSMA as a resident and eventually as a practicing physician.

Thanks so much,
B. MINK, M.D.

Medico-Legal Brief

Attorneys' Boycott Violates Federal Antitrust Laws

A boycott by a group of attorneys in private practice who served as court-appointed counsel for indigent criminal defendants in the District of Columbia violated federal antitrust laws, the U.S. Supreme Court ruled.

During 1982, court-appointed counsel represented defendants in about 25,000 cases in the District of Columbia courts. Serious felony cases were represented by full-time employees of the Public Defender System. Less serious felony and misdemeanor cases constituted about 85 per cent of the total caseload. In these cases, lawyers in private practice were appointed and compensated at the rate of $30 per hour for court time and $20 per hour for out-of-court time.

Beginning in 1982, the local trial lawyers association and other bar groups sought to persuade the District to increase rates to at least $35 per hour. The 100 or so lawyers who regularly provided court-appointed counsel decided not to accept any new cases after September, 6, 1983, if the fees had not been increased by the legislature.

On September 6, about 90 per cent of the regulars refused to accept any new assignments. The association arranged a series of events to attract the attention of the news media and to obtain additional support. Within two weeks the criminal justice system in the District was on the brink of collapse because of the boycott. The mayor met with members of the strike committee and offered to support an immediate temporary increase to the $35 level as well as a subsequent permanent increase to $45 an hour for out-of-court and $55 for in-court time. The offer was accepted and the boycott ended.

The Federal Trade Commission filed a complaint against the trial lawyers association and four of its officers, alleging that they had entered into a conspiracy to fix prices and to conduct a boycott that constituted unfair methods of competition. An administrative law judge found that the complaint was proven but said that it should be dismissed because there was no harm done. The increase in fees would attract more lawyers, enabling them to reduce their caseloads and provide better representation for clients.

The FTC rejected the decision and entered a cease and desist order prohibiting future boycotts. A federal appellate court vacated the FTC order and remanded for a determination whether the association and attorneys possessed significant market power. The court said that the boycott contained an element of expression warranting First Amendment protection.

On appeal, the U.S. Supreme Court said that the boycott constituted a horizontal arrangement among competitors that unquestionably restrained trade in violation of antitrust laws. The court said that the First Amendment offered no immunity because the undenied objective of the boycott was to gain an economic advantage for those who agreed to participate. The court also said that the appellate court erred in creating a new exception to the antitrust per se liability rules for boycotts having an expressive component. The high court said that the per se rule that price fixing and boycott activities violated antitrust laws did not depend on whether the actors possessed the power to control market prices.

The court remanded the case for further proceedings. — *Federal Trade Commission v. Superior Court Trial Lawyers Association,* 110 S.Ct. 768 (U.S.Sup.Ct., Jan. 22, 1990)

Editor's Note: The American Medical Association filed a brief *amicus curiae* in support of the trial lawyers. The AMA argued that boycotts that are obviously intended to sway public opinion to achieve political ends raise free speech issues under the First Amendment, and merit special treatment under the antitrust laws.

SPECIAL ARTICLE

Dr. Nix Installed as MSMA President; Dr. Waites Named President-Elect

Dr. J. Elmer Nix of Jackson was inaugurated 1990-91 president of the MSMA at the closing meeting of the 122nd Annual Session held in Jackson, May 31-June 3, 1990. He succeeds Dr. J. Ed Hill of Hollandale. Dr. James C. Waites of Laurel was named president-elect.

The new MSMA president has served as president-elect and as association secretary-treasurer for nine years. He currently serves as MSMA delegate to the American Medical Association. He is a member of Southern Orthopaedic Association, the Mid-America Orthopaedic Association and the Clinical Orthopaedic Society. Dr. Nix is past president of the North America Spine Society, and the Mississippi Arthritis Foundation. He also is past secretary of the Board of Councilors for the American Academy of Orthopaedic Surgeons.

Dr. Waites, the new president-elect, has served as MSMA's Speaker of the House. He is currently serving as an MSMA delegate to AMA. He has served as secretary, treasurer, vice president, and president of the Mississippi Academy of Family Physicians. In 1987, Waites was named Family Doctor of the Year by the Mississippi Academy of Family Physicians of which he is a Charter Fellow.

Some 700 physicians, spouses and guest registered for the five-day session, which featured a full program of scientific, business, and fellowship activities.

Among special guests addressing the House of Delegates were Dr. Alan R. Nelson, president of the American Medical Association and Jean Hill of Hollandale, the first woman from Mississippi to serve as president of the AMA Auxiliary.

In addition to electing new officers, the House of Delegates took action on reports and resolutions concerning health care in Mississippi. A summary of House actions appears on page 235 of this issue.



Dr. Nix, right, repeats the oath of office as MSMA president. The oath was administered by Dr. David Owen, left, chairman of the Board of Trustees, and Charles Mathews, MSMA executive director, center.



Following his installation as 1990-91 president of the MSMA, Dr. Nix, center, was pictured with president-elect Dr. James C. Waites, left, and immediate past president Dr. Ed Hill, right.



President Hill addressed the House of Delegates during the Thursday morning opening session.



Dr. Ed Hill, left, receives his past president's pin from incoming MSMA President Dr. J. Elmer Nix, right, during the closing session of the 122nd House of Delegates.

Elections Highlight House of Delegates Sessions

Delegates to the 122nd Annual Session named Dr. James C. Waites of Laurel as MSMA's 1990-91 president-elect, and elected Dr. H. Vann Craig of Natchez as Speaker. Dr. Eric McVey, III of Jackson was elected as vice-speaker and Dr. William B. Hunt of Grenada was re-elected as vice-president from the northern district.

Dr. Eric E. Lindstrom was elected to the Board of Trustees representing District 6. Re-elected to posts on the Board of Trustees were: Drs. Fred L. McMillan of Jackson, Mal G. Morgan of Natchez and David L. Clippinger of Gulfport. Dr. George Abraham of Vicksburg was re-elected associate editor of JOURNAL MSMA.

Several members of MSMA's delegation to the AMA were re-elected to serve new terms. Returning as delegates are: Drs. Sidney O. Graves of Natchez, William C. Gates of Columbus, and J. Elmer Nix of Jackson. Returning as alternate delegates to the AMA are: Drs. Alton B. Cobb of Jackson, and W. Joseph Burnett of Oxford. In addition, Dr. Fred L. McMillan of Jackson was named alternate delegate to AMA.

Elected to fill vacancies on Councils were: Drs. Hugh A. Gamble of Greenville, Council on Budget and Finance, and Chester Masterson of Vicksburg, Council on Constitution and Bylaws. Named to the Judicial Council were Drs. W. Joseph Burnett of Oxford, William F. Sistrunk of Jackson, and Gary G. Gordon of Meridian. Elected to serve on the Council on Legislation were: Drs. George McGee of Hattiesburg, J. C. Barnett of Brookhaven and Jack C. Hoover of Pascagoula.

Drs. Edwin G. Egger of Greenville, George V. Smith of Grenada, and Mary S. Gaines of Starkville were named to the Council on Medical Education. Drs. David L. Walt of Cleveland, William A. Spencer of Oxford, and J. M. Patterson of Pontotoc were named to the Council on Medical Service and Drs. Mickey Wallace of Jackson, Joseph Seifker of Meridian and Jack C. Evans of Laurel were named to the Council on Public Information.

Board of Trustees Elects New Officers

Dr. Lee H. Rogers of Tupelo was elected chairman of the MSMA Board of Trustees during the board's meeting June 3, in Jackson. Dr. Mal G. Morgan of Natchez was elected vice-chairman and Dr. Fred McMillan of Jackson re-elected as secretary. *(Continued on page 247)*

Awards Presentation
122nd Annual Session



Dr. Hill, right, presented checks totaling over $26,000 to Dr. Norman Nelson, left, dean of the University School of Medicine.



Dr. Stanley Hartness, left, presented one of MSMA's first Media Awards to Ms. Helen Chickering of WLBT TV-3, Jackson for her series of programs on breast cancer. The media award in the print category went to Ms. Wilma S. Lambert of the Copiah County Courier for her series of articles on heart disease.



Dr. Charles G. Pigott received the Robert S. Caldwell Memorial Award presented by Medical Assurance Company of Mississippi.



Dr. Mathew Page of Greenville, left, congratulates Dr. Robert Smith of Jackson, right, after he received the 1990 MSMA Community Service Award.



Dr. Alan R. Nelson, president of the AMA, spoke to the members of the House of Delegates during the opening session.



Members participated in the MSMA Hospital Medical Staff Section meeting.



Mrs. Nancy Lindstrom, MSMA Auxiliary President, described auxiliary activities in her report to the House of Delegates.



The House of Delegates in session.



Mrs. Jean Hill, AMA Auxiliary President, shared her experiences of the past year and thanked the House of Delegates for their support.



Members of the House of Delegates prepare to mark their ballots.



Dr. J. Elmer Nix addressed the House of Delegates following his installation as 1990-91 MSMA president.



Dr. James C. Waites presided as speaker of the House of Delegates.



Dr. Vann C. Craig, vice speaker, helped conduct the business of the House of Delegates.



Members of the House of Delegates mark their ballots.



Delegates mark their ballots.



Delegates mark their ballots during the closing session of the House of Delegates.



Dr. Myron Lockey discusses a report under consideration.



Dr. Mal Morgan asks for clarification of an issue under discussion.



Dr. George Wilkerson comments on a matter before the House.



Members of the House of Delegates prepare to mark their ballots.

122nd Annual Session May 31-June 3, 1990

House of Delegates Handles Busy Agenda

The House of Delegates of the Mississippi State Medical Association handled an extensive agenda of reports and resolutions at the 122nd Annual Session, held in Jackson.

The House of Delegates adopted reports and resolutions directing these major actions:

- Directed the Council on Medical Education to confer with peer review and professional liability insurance entities in MS and develop a plan for presentation to the House of Delegates at the 1991 Annual Session to provide CME at annual meetings of the association based on identified needs of MS physicians.
- Adopted a recommendation that the association conduct its annual meetings in late April or early May at the earliest date available, and alternate sessions between Jackson and the Gulf Coast.
- Adopted several resolutions identifying health care deficiencies in MS, urging a study of OB and perinatal services and supporting financial incentives for physicians to practice in rural areas.
- Received a report from the association's Environmental Protection Committee which recommended regulations for infectious and medical waste and urged physicians to develop an attitude of environmental stewardship.
- Directed that a study be done to determine why physicians are leaving the state.
- Urged support for HR 4475, "The Medicare Physicians Relief Act of 1990," and commended members of the MS Congressional Delegation who sponsored the legislation.
- Commended the diligent efforts of Dr. Clinton Smith, Director of the Medicaid Program, to significantly reform and expand the program.
- Adopted an updated MSMA Policy Statement on AIDS/HIV and voiced continued support for legislation to prevent discrimination against HIV-infected persons.
- Endorsed AMA Health Access American Plan.
- Commended retiring *Journal MSMA* managing editor, Mrs. Patsy Twiner, for her work and dedication to the association.
- Urged MSMA and its members to encourage and participate in education programs for junior and senior high school coaching staffs.
- Urged support for a program to provide comprehensive, multidisciplinary early intervention services for infants and toddlers with special needs.
- Supported a requirement that health insurance companies provide their insureds or their insureds' physician with specific claim information necessary to provide payment of benefits.
- Urged legislation to prohibit smoking by minors and to ban cigarette vending machines in Mississippi.
- Urged continuing efforts to address the issue of care of the medically needy in the state.
- Urged continuing efforts to develop physician/patient communication projects.
- Supported the association's efforts to develop school health education projects and a local school district medical advisers panel.
- Urged better education and closer supervision with respect to the role of nurse practitioners.
- Urged support for enactment of HR 2276, which would prohibit "lift-chair" vendors from soliciting Medicare beneficiaries by sending them certification forms and reduce Medicare payment for "lift-chairs" by 15 percent; and urged that the AMA study the clinical indications, effectiveness and cost benefit of "lift-chairs."
- Urged the State Department of Vocational Rehabilitation to recognize and reimburse services at all institutions in the state staffed and equipped to provide rehabilitation services.
- Adopted a requirement that a Board or Council member be replaced if he/she misses two meetings annually without permission of the chairman.

122nd Annual Session Continued

- Adopted an amendment to the MSMA Bylaws to provide that the Speaker and Vice Speaker will appoint reference committee members.
- Adopted amendments to the MSMA Bylaws clarifying the requirements for a controlled substance registration certificate as a condition of membership.
- Laid on the table for one year, as required by the MSMA Constitution, amendments to the MSMA Constitution and Bylaws which, if enacted, would: (1) eliminate the office of Vice President; (2) make the Secretary-Treasurer a voting member of the Board of Trustees; (3) restrict the eligibility for the offices of Chairman, Vice Chairman and Secretary of the Board of Trustees to elected trustees representing one of the eight association districts; (4) limit the term of office of the Speaker and Vice Speaker to no more than two consecutive three-year terms; and (5) change the official title of the association's Executive Secretary to Executive Director.
- Presented AMA-ERF checks totalling over $26,000 to the University of MS School of Medicine.

Serving on Reference Committees of the House were:

Reference Committee on Rules and Order of Business

Richard C. Miller, M.D., Chairman
Kate N. Aseme, M.D.
J. George Smith, M.D.

Reference Committee A (Reports of Officers, Board of Trustees and Councils)

Michael H. Carter, Jr., M.D., Chairman
Thomas C. Fenter, M.D.
David M. Gilder, M.D.
Barney J. Guyton, M.D.

Reference Committee B (Reports of Officiers, Board of Trustees and Councils)

William C. Gates, M.D., Chairman
Fred H. Ingram, M.D.
Candace Keller, M.D.
Louie F. Wilkins, M.D.
Nell C. Moore, M.D.

Credentials Committee

Don Q. Mitchell, M.D., Chairman
Mike Maples, M.D.
Harry C. Frye, M.D.

Reference Committee on Constitution and Bylaws

Eric E. Lindstrom, M.D.
Dayton E. Whites, M.D.
Jack C. Evans, M.D.

Nominating Committee

Mal G. Morgan, M.D., Chairman
Ed Hemness, M.D.
William B. Hunt, M.D.
T. Steve Parvin, M.D.
Julian C. Henderson, M.D.
Dewitt Crawford, M.D.
Eric Lindstrom, M.D.
Robert J. Schmidt, M.D.

123rd Annual Session
May 15-19, 1991
Biloxi, MS



Dr. George McGee discusses an issue before the House.



Dr. Chester Masterson comments on a matter before the House of Delegates.



Dr. David Hill addresses a report under consideration.



Members of the House of Delegates enjoy opening session remarks.

Plenary Sessions



Dr. Walter Jones and Dr. Brent Eastman, guest speaker from La Jolla, CA discuss issues during the Surgery Plenary Session.



Dr. Alton Cobb, left, answers a question during the session on trauma. Others on the panel include Dr. David Bussone and Wade Spruill, Jr. and Dr. Robert Rhodes, standing.



Participating in the Surgery Plenary Session, were, from left, Dr. Robert Rhodes, Dr. Brent Eastman, Dr. Hugh Gamble, and Dr. James Hughes.



Helen Chickering of WLBT-TV interviews Medicine Plenary speaker Dr. Reagan H. Bradford of Oklahoma.



Dr. Don Mitchell, secretary-treasurer, announces award winners.



Dr. John Hassell, presided over the Medicine Plenary Session.



Thomas Moore of Washington, D.C. prepares to speak during medicine session.

MSMA Auxiliary



Dr. and Mrs. Fred McMillan of Jackson were among high bidders in the MSMAA's auction benefitting AMA-ERF.



Merrell Rogers, second left, is 1990-91 MSMA Auxiliary President. With her, from left, are: Nancy Lindstrom, past-president; Sylvia Walker, president-elect; Kathy Carmichael, first vice-president; Karen Stephens, second vice-president; Peggy Crawford, recording secretary; Kathy Stumme, treasurer; Sara Ann Owen, parliamentarian; not shown, Nina Moffitt, third vice-president, and Jane Griffin, fourth vice-president.



Past Presidents of the MSMA Auxiliary met for their annual breakfast during the Annual Session.



Dr. William C. Gates served as chairman of Reference Committee B.



Delegates from the Meridian area prepare for the House of Delegates. Members include, from left, Dr. James Mathews, Dr. Stanley Wade, Dr. Dewitt Crawford and Dr. Richard F. Riley.



Dr. Candace E. Keller and Dr. Nell C. Moore served as committee members of Reference Committee B.



Dr. Thomas C. Fenter and Dr. Douglas F. Thomas were members of Reference Committee A.



Serving as committee members of Reference Committee B were Dr. Fred H. Ingram and Dr. Louie F. Wilkins, Jr.



Dr. David M. Gilder and Dr. Barney J. Guyton served as committee members of Reference Committee A.

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Above, Dr. John M. Estess and his wife Dottie receive a special tribute from Dr. Ed Hill for keeping the practice going during his year as MSMA president. Below, Dr. Hugh A. Gamble, Dr. C. Foster Lowe and Dr. David M. Owen enjoy a coffee break.





Delegates Dr. Nancy O. Tatum, Dr. John J. Hollister and Dr. L. H. Brandon discuss the agenda for the House of Delegates.



Dr. Michael Carter served as chairman of Reference Committee A.



Dr. Ellis M. Moffitt discusses a resolution under consideration.



Dr. Tom F. Carey makes a comment during the Reference Committee meeting.

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PERSONALS

John Abide and **J. A. Marascalco** of Greenville conducted skin cancer screenings at the Delta Medical Center on May 26.

Thomas J. Anderson, Charles Hollingshed, Thomas R. Howell, and **Robert E. Jennings** have all associated with the North Laurel After Hours Clinic.

John Bagnato and **George McGee** of Hattiesburg were faculty instructors at a course on laparoscopic laser-assisted cholecystectomy in Connecticut, May 4-5. They taught surgeons from the New England area in this course sponsored by U.S. Surgical Corporation and the University of Maryland.

William Billings of West Point led an open forum on weight control as a part of the lunch time learning series at the Clay County Medical Center.

Frank Bowen of Carthage was re-elected president of the Leake County Heart Association.

Harry L. Butler of Hattiesburg has associated with **Glenn N. Smith** at the Hematology and Oncology Clinic for the practice of hematology and medical oncology.

Richard Conn of Hattiesburg presented an educational program on arthritis of the knee and its surgical management.

Eric M. Dyess of Meridian Medical Associates has recently become board certified in endocrinology.

Richard T. Furr of Ocean Springs has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

William Gary Giles of Hattiesburg was recently elected to the Regional Membership Committee of the American Academy of Orthopaedic Surgeons. This committee reviews physician credentials for certification for the Board of Orthopaedic Surgeons.

Willie E. Greer of Meridian announced his relocation and the opening of the Sixteenth Avenue Clinic which is affiliated with Rush, Riley, and Anderson Hospitals.

Robert H. Guinter and **Deborah D. Watson** announced their association with Baptist Memorial Hospital-Desoto for the practice of pediatrics with offices in the Physicians Office Building.

O. Lynn Hamblin of Calhoun City has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

James J. Hoth of Woodville announced the opening of his office for the Diseases and Surgery of the Eye.

James Holzhauer of West Point spoke at the Clay County Medical Center on hormone replacement/ PMS.

James Darrell Jee of Greenwood announces the opening of his practice of family medicine with offices located in Greenwood and Carrollton.

Luby Jones and **Mike Foster** have announced their association with Baptist Memorial Hospital-Desoto for the practice of general surgery with offices located in the Physicians Office Building.

Roger S. Labonte has announced his association with Baptist Memorial Hospital-Desoto for the practice of internal medicine with offices located in the Physicians Office Building.

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Sherry Martin of Hattiesburg will pursue an endocrinology fellowship at Ochsner Clinic in New Orleans, Louisiana.

Frank Morgan of Jackson was re-elected vice chairman of the FLEX Board at the annual meeting of the Federation of State Medical Boards held in Birmingham. He was also named by the board to membership on the Composite Committee which oversees composition of the U.S. Medical Licensure Examination.

Toxey Morris and **Hal Liddell** of Hattiesburg attended the Southeastern Section Meeting of the American Urological Association. Dr. Morris, president of the Mississippi Urological Society, presided over the scientific sessions involving methods of treatment for prostate trouble, including balloon dilation of the prostate.

William C. Nicholas of Jackson made presentations to the Monticello Lion's Club, the Lion's Club State Meeting in Tupelo and presented the Magnolia Award, Mississippi Dietetic Association, Starkville, MS.

J. Hunter Phillips, III of Hattiesburg has associated with **Ronald R. Lubritz** for the practice of dermatology and dermatologic cosmetic surgery.

Ron Powell of West Point spoke on handling emergencies at the Clay County Medical Center six week lunch time learning series.

Douglas Rouse of Hattiesburg was elected Mississippi Counselor for the Southern Orthopaedic Association. He also attended the annual meeting of the Association in Hawaii.

Bennett E. Smith, Jr. of Hattiesburg announces the relocation of The Hattiesburg Adolescent Clinic to 105 Asbury Circle off east Methodist Hospital Drive.

Dale A. Touchstone of Meridian Medical Associates has recently become board certified in cardiovascular diseases.

Charles A Van Wart of Starkville announces the opening of his practice for surgery and diseases of the ear, nose, and throat and nasal allergy.



POSTGRADUATE CALENDAR

August

OPHTHALMOLOGY UPDATE
Aug. 17-18
Ramada Renaissance Hotel, Jackson

September

ADVANCED TRAUMA LIFE SUPPORT PROVIDER COURSE
Sept. 6-7
University Medical Center

ADVANCED BURN LIFE SUPPORT PROVIDER COURSE
Sept. 29
University Medical Center

For more information or a program brochure, contact the University of Mississippi Medical Center Division of Continuing Health Professional Education, 2500 North State Street, Jackson, Mississippi 39216-4505; or call (601) 984-1300.

Board of Trustees

(Continued from page 230)

Other members of the board are: Drs. Walter H. Rose of Indianola, Stanley Hartness of Koscuisko, John P. Lee of Forest, Stanley A. Wade, Jr. of Meridian, Eric E. Lindstrom of Laurel, and David L. Clippinger of Gulfport. Also meeting with the board are: Drs. Elmer Nix, president; James C. Waites, president-elect; and Ed Hill, immediate past president.

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MSMA Membership Benefits

Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrative here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

HEALTH INSURANCE

MSMA members who are organized as PAs and wish to provide health insurance coverage for their employees are eligible to participate in a self-insured 501(c) (9) trust sponsored and administered by a subsidiary of the association. All MSMA members are also eligible to apply for health insurance programs offered by the American Medical Association. For further information contact Jackye Wiebelt at MSMA Diversified Services, Inc.

MEDICAL MALPRACTICE INSURANCE

The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

DISABILITY INCOME INSURANCE

Based on careful evaluation of the market and periodic reevaluation, MSMA endorses a disability income insurance program. MSMA members receive a discount and are assured of coverage by a reputable national company with a track record of writing coverage for professionals. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

LIFE INSURANCE

MSMA members by virtue of their membership in the AMA are eligible for a variety of life insurance programs sponsored by the AMA. Because of their size these programs can be offered at low cost group rates. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

MEDICAL SUPPLIES

MSMA members are eligible to participate in a group purchasing program for medical supplies. Professional Group Services offers a wide range of quality, low-cost equipment and supplies for the physician's office. For further information call Davis Richards at MSMA.

FINANCIAL/RETIREMENT PLANNING

MSMA members by virtue of their membership in the AMA are eligible to participate in AMA Investment Advisors, Inc. This wholly owned investment subsidiary of the AMA offers a wide range of investment opportunities tailored specifically for physicians. For further information call Davis Richards at MSMA.

PRACTICE MANAGEMENT

Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics from CPT-IV coding to patient surveys. For further information call Jackye Wiebelt at MSMA Diversified Services, Inc.

DEBT COLLECTION SERVICE

Based upon sponsorship by medical associations in many states, IC System is endorsed by MSMA to perform debt collection services for offices and clinics of member physicians. IC System has a proven national track record as a debt collection service. For further information call Davis Richards at MSMA.

TRAVEL PROGRAMS

Each year MSMA selects several outstanding travel opportunities provided by INTRAV, a highly respected travel organization specializing in group travel arrangements. INTRAV's "frequent traveler" program attests to the satisfaction of its clients. For further information call Kay Gatewood at MSMA.

Information Sources

MSMA and MSMA Diversified Services — 735 Riverside Drive, Jackson, MS 39202; 601-354-5433 or 800-898-0251 (In-State Watts)

Medical Assurance Company of MS — 735 Riverside Drive, Jackson, MS, 39202; 601-353-2000 or 800-325-4172 (In-State Watts)

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WINONA, MS — Family Practice, Surgery, Internal Medicine, OB/GYN, Pediatrics. Excellent quality of life, exceptional public school system. Summer Scholarship Grant for college tuition. Crossroads of I-55 and Highway 82; 88 miles to Jackson, 110 to Memphis. Recruitment package available. Contact Richard Manning, Administrator, Tyler Holmes Memorial Hospital, Winona, MS 38967; (601) 283-4114.

EMERGENCY ROOM physicians wanted. Eight hospital contracts in northeast Mississippi. Salary ranges $90,000 to $150,000 plus health insurance, life insurance, malpractice insurance, moving expenses. Call (601) 328-8385.

WINNFIELD, LOUISIANA — Seeking full-time and part-time emergency physicians for low-volume 98 bed hospital. Excellent compensation, flexible schedule and paid malpractice insurance. Full-time staff eligible to participate in benefit program. Contact: Emergency Consultants, Inc., 2240 S. Airport Rd., Room 46, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

BOARD ELIGIBLE or certified internal medicine specialist sought for multispecialty clinic in Vicksburg. Excellent beginning guarantee and fringe benefits. Contact Robert Quimby at (800) 654-7924 (in state) or (800) 522-7271 (out of state), or write Box 231, Vicksburg, MS 39181 for further information.

MISSISSIPPI — BC/BE pediatrician wanted to join busy solo pediatrician in beautiful, historic community in deep South. Excellent modern community hospital with Level II nursery. Family oriented community with excellent schools, year round recreation, access to urban centers. First year salary and incentive, leading to early partnership. Send CV and references to: David Eakes, M.D., 425 Hospital Dr., Columbus, MS 39701.

EMERGENCY PHYSICIANS needed at two low volume facilities in northern Mississippi. ACLS certification and primary care experience required. Excellent compensation and paid malpractice insurance. Contact: Emergency Consultants, Inc., 2240 S. Airport Rd., Room 46, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

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MEDICAL DIRECTOR — Nonprofit, ambulatory, community health center seeks an experienced primary care physician with a commitment to serving underprivileged communities. Family Practice and Internal Medicine speciaists are preferred. Applicants must be board eligible or board certified, and possess strong management and organizational skills. Send resume to: Personnel Department, Charter Oak Terrace/Rice Heights Health Center, 81 Overlook Terrace, Hartford, CT 06106; EOE.

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May 15-19, 1991

Biloxi, MS

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 23-27, 1991, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 123rd Annual Session, May 15-19, 1991, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. James Clarkson, Secy., P.O. Box 128, Biloxi 39533. Counties: Hancock, Harrison, Stone.

Delta Medical Society. 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. Tom Stanford, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Melissa Dockery, Secy., 830 Medical Center Dr., West Point 39773. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. Paul Moore, Jr., Secy., 1214 Farnswort Ave., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society., 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Robert Clingan, Secy., 100 McCauley Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

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Jackson, MS 39202

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Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Seargeant Prentiss Dr.
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
I-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave.
Pascagoula, MS 39567

Greenwood Leflore Hospital
1401 River Rd.
Greenwood, MS 38930

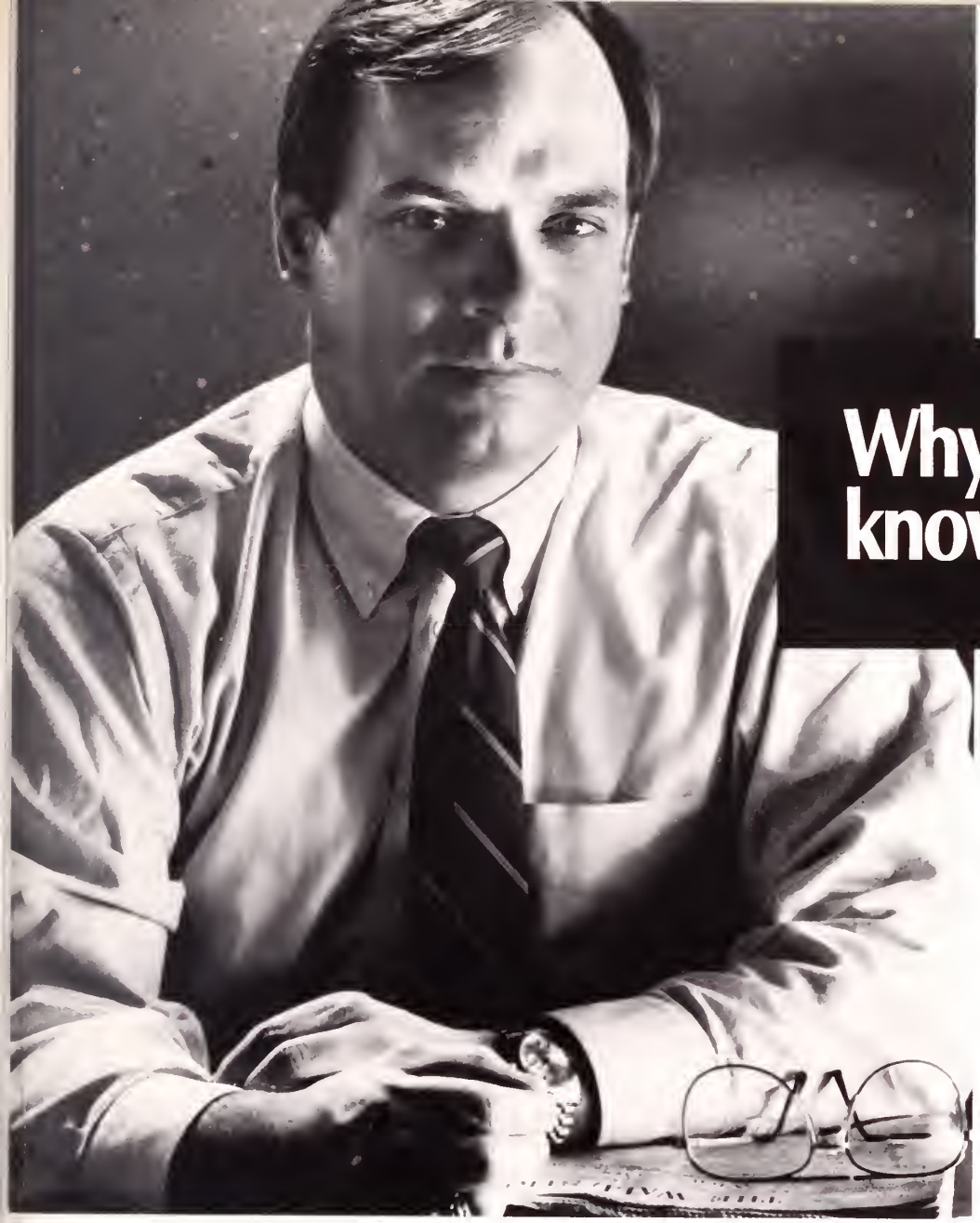
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Gulfport, MS 39501

Baptist Memorial Hospital of North Mississippi
Highway 7, South
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
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AUGUST 1990





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NEWSLETTER

August 1990

Dear Doctor:

Mississippi's resolution concerning lift chairs was amended and approved by the AMA House of Delegates during the June Annual Meeting. The approved resolution calls for the following: (1) that the AMA study the feasibility of supporting appropriate provisions of H.R. 2276 related to the marketing and Medicare payment for lift chairs; (2) the AMA study and report on the clinical indications, medical effectiveness and cost benefit of lift chairs; and (3) that the AMA also review and report on the current marketing practices of durable medical equipment companies under the Medicare program.

> J. Edward Hill, M.D., immediate past president MSMA, was appointed to the AMA Council on Legislation. Dr. Hill will serve a one year term and is eligable for re-appointment.

The AMA Council on Medical Service report underscored the concern with access to rural health care. A resolution was adopted calling for the AMA to give continued priority to the elimination of geographic variations in Medicare payments that do not reflect demonstrable variation in practice overhead or professional liability costs. This resolution also calls for continued support and work to establish in the 1990 Budget Reconciliation Act a floor of 1991 Medicare payments for physician services at 80% of the national average prevailing charge.

The AMA was also directed to work through appropriate channels to ensure that the RBRVS-based Medicare payment system be implemented in a manner that reflects appropriate economic considerations. The resolution requested that the AMA work to ensure that the most current, valid, and reliable data are collected and applied in calculating accurate geographic practice cost indices (GPCIs) and in determining geographic payment areas for use in the new Medicare physician payment system with data collected from rural practice sites for this purpose.

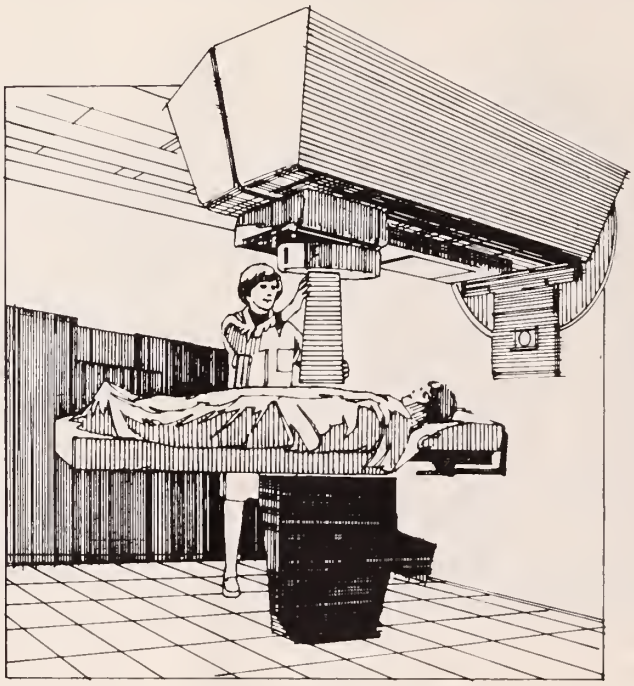
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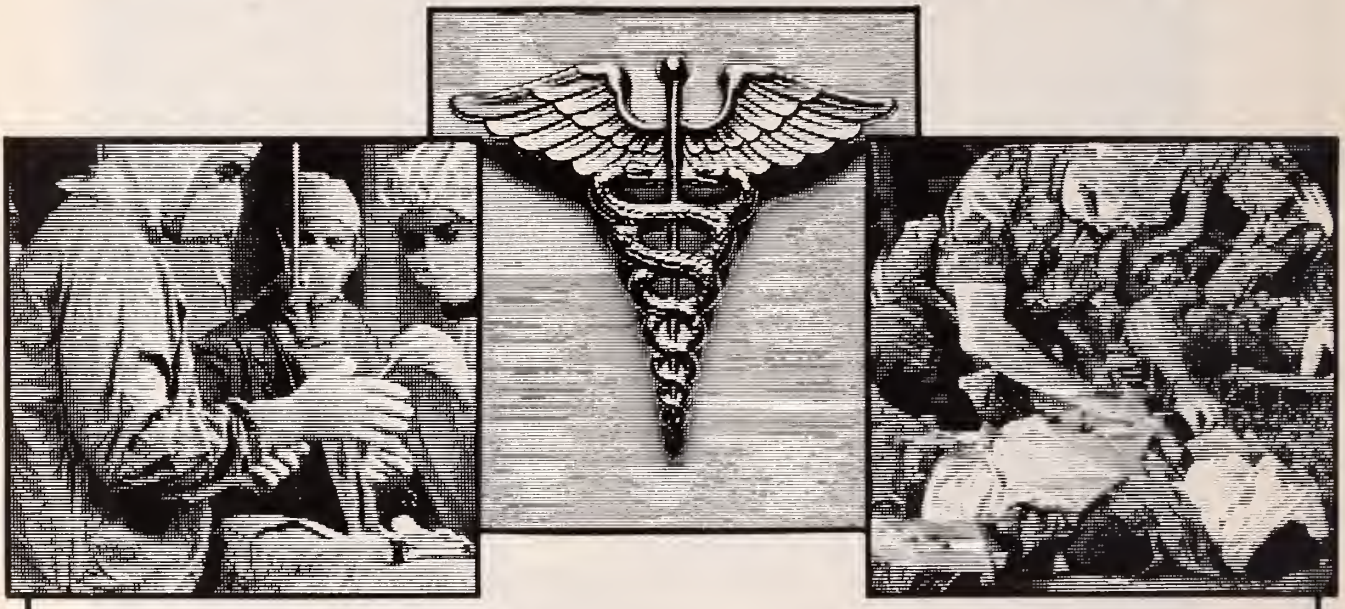
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DATELINE

Medicaid Figures Released

Jackson, MS - According to the Division of Medicaid, Mississippi has one of the highest federal "match rates" in the country, 79.8 percent. This means the federal government puts up $3.95 for every $1 the state spent. During Fiscal Year 1989, 453,551 people received help through the Medicaid program in Mississippi, compared to 411,132 the year before.

Hill Looks Back on Year as AMAA President

Chicago, IL - "Let us continue to build on our successes to reach the goal we share in this and every year -- to improve the health and quality of life for all people in this nation," said AMA Auxiliary President Jean Hill in her final address to the organization's leaders and members. She stressed the importance of unity within the medical community and health education.

Faster Medicare Payments Ordered by OMB

Washington, DC - After July 1, Medicare will pickup the pace for paying some physician claims. At the order of the Office of Management and Budget, Medicare officials have suspended the 14-day floor. The order is expected to shave about six to eight days off payment times. It was done to make it easier to meet 1991 budget targets.

Living In A Noisy World Affects Hearing

Chicago, IL - Noisy surroundings, beginning even before a newborn leaves the hospital, cause hearing loss for millions of Americans, according to a report in the June 20 Journal of the American Medical Association. More than 20 million Americans are exposed on a regular basis to hazardous noise levels that could result in hearing loss.

State's Infant Mortality Rate Drops Again

Jackson, MS - The State's infant mortality rate dropped again in 1989 to 11.6 deaths per 1,000 births. For the first time the number of babies under 1 year old who died was below 500 at 497. The 1988 rate was 12.3 deaths per 1,000 and in 1985 it was about 14.4. About 45 percent of the pregnant women in the state use the services of the Health Department

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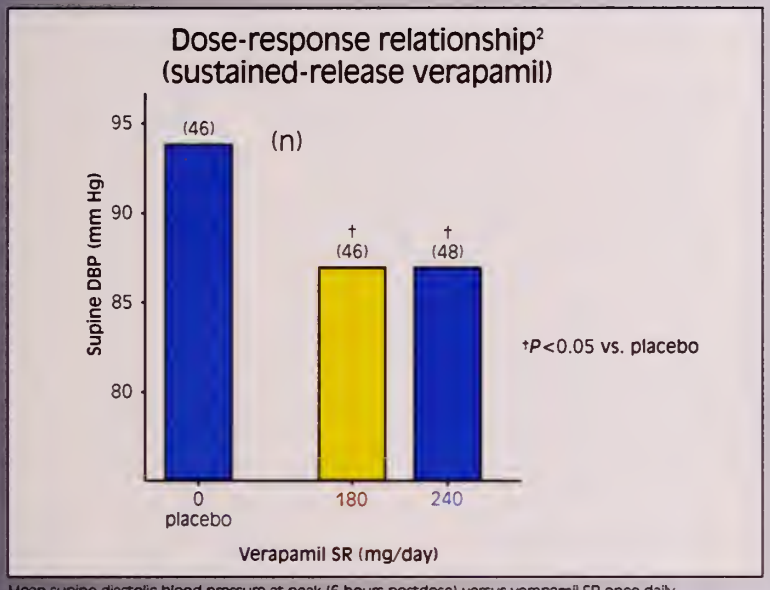
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SUSTAINED-RELEASE CAPLETS

BRIEF SUMMARY

Contraindications: Severe LV dysfunction (see *Warnings*), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

Warnings: Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

Precautions: Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol clearance may occur with combined use. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digitoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

Adverse Reactions: Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°,2°,3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecomastia, increased urination, spotty menstruation, impotence.

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4. Scand J Gastroenterol 1987;22(suppl 136):61-70.
5. Am J Gastroenterol 1989;84:769-774.

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Brief Summary. Consult the package literature for complete information.

Indications and Usage: 1. *Active duodenal ulcer* – for up to eight weeks of treatment. Most patients heal within four weeks.

2. *Maintenance therapy* – for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than one year are not known.

Contraindication: Known hypersensitivity to the drug. Use with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy.

Drug Interactions – No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy – Teratogenic Effects – Pregnancy Category C – Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers – Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events was due to the drug.

Hepatic – Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to three times the upper limit of normal, however, did not significantly differ from that in placebo patients. Hepatitis and jaundice have been reported. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic – Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental – Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Because cross-sensitivity among this class has been observed, H_2-receptor antagonists should not be administered to those with a history of hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

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Additional information available to the profession on request.

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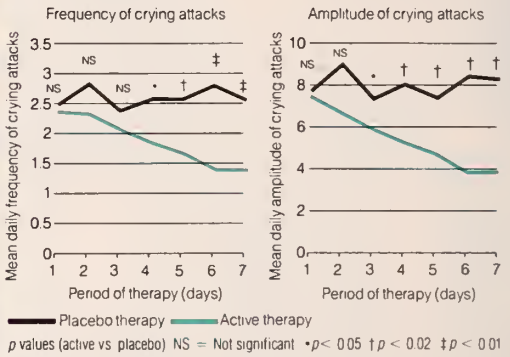
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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner*. 1988;232:508

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ORIGINAL PAPERS

Electrophysiologic Monitoring of the Facial Nerve During Basal Cranial and Posterior Fossa Surgeries

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DURING SURGERIES involving the posterior cranial fossa and basal portions of the brain, paralysis of the facial muscles is not an uncommon operative complication.[1] The facial paralysis may be noted immediately after surgery, or it may be delayed with the latter appearing in the third to fifth postoperative day.[2] Immediate facial weakness is related to anatomical disruption or contusion of the nerve during surgery. The explanation for the delayed facial weakness is not entirely clear. It is presumably related to postoperative edema and swelling with subsequent compression of the facial nerve or to nerve ischemia.[2]

A peripheral facial nerve palsy can produce fairly severe functional disabilities as well as cosmetic disfigurement. Complete paralysis of the orbicularis oculi muscle results in inability to close the eye. This may lead to frequent exposure keratitis, and if left unattended, this ultimately results in loss of visual function. Thus, it is of paramount importance during the surgical procedure that the integrity of the facial nerve should be preserved as much as possible. However, there may be instances in which the facial nerve cannot be visually identified with reliability due to severe distortion of the normal anatomy, such as encasement of the nerve by invading neoplasms, overgrowth of granulomatous tissues, or excessive scarring from previous surgical interventions. In such difficult cases, the facial nerve may be identified functionally through electrophysiologic means. During the procedure, the facial nerve is electrically excited, and the appropriate motor response is noted either by visually inspecting the facial movements or

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by recording the compound muscle action potentials from the facial muscles.[1]

In this report, we describe a simple technique of monitoring the facial nerve intraoperatively through electrophysiologic recordings.

Recording Technique

Recording electrodes consist of sterile scalp electroencephalographic (EEG) needles. After general anesthesia is induced and the operative field is prepared, the needle EEG electrodes are inserted subdermally over the appropriate facial muscles. We prefer to record motor responses simultaneously from at least four facial muscle groups: the frontalis, orbicularis oculi, orbicularis oris, and mentalis. Recording from at least four or more facial muscles ensures that more fascicles of the facial nerve can be monitored. During insertion of the needle electrodes, strict sterile precautions should be observed since these electrodes are near the operative field. The active needle recording electrode is inserted subdermally just above the muscle (e.g. frontalis) that is to be recorded. The reference needle recording electrode is placed 1 to 2 cm away from the active recording electrode, but still near or above the same muscle. This relatively short interelectrode recording separation reduces the size of the electrical stimulus shock artifacts and other contaminations due to external noise. When inserting the electrode, the whole length of the recording portion of the needle should be buried subdermally. This procedure assures stable contact of the needle electrode, reduces the recording impedances, and enables the electrode to sample a larger amount of action potentials generated by the muscle fibers. The above recording derivation or montage requires the use of two needle electrodes per one muscle group. Hence, when recording from four facial muscle groups, eight electrodes are required. The same type of needle EEG electrode may be utilized as a ground electrode, and this is placed either in the scalp or facial region. When all of the electrodes are in their proper locations, a sterile adhesive plastic sheet is draped over the electrodes along one side of the face.

A multi-channel computerized electromyographic (EMG) or evoked potential equipment may be utilized in recording the muscle potentials. To record the electrically evoked facial compound muscle action potentials (CMAPs), a filter bandpass of 20 to 1000 Hz (–3 dB; slope of 12 dB/octave) is adequate. The analysis time is usually set at 20 or 40 msec. The sensitivity setting is adjusted appropriately to match the size of the evoked CMAPs without blocking the amplifiers. The facial CMAPs obtained serially during facial nerve stimulation are analyzed directly on the computer display screen looking for any change in the morphology, amplitude, and latency. These parameters are measured with computer-generated cursors. After each observation, the waveforms are stored in computer disks for documentation and generating a formal report of the monitoring procedure. Permanent copies may be written by an X-Y plotter or a printer.

The stimulating electrode may be of the monopolar or bipolar type. We prefer a close bipolar stimulating electrode with a 3- to 5-mm cathode-to-anode separation when electrically exciting a nerve.[3] This produces a smaller stimulus shock artifact in the recording. Also, the site of nerve stimulation is more selective with minimal or no spreading of the electrical current to adjacent tissues or other cranial nerves. A constant-voltage stimulator may be used, and the stimulating electrode is connected to a stimulus isolation unit for electrical safety. Stimulus duration is usually set at 0.05 msec. Since the local current density produced by a close bipolar stimulating electrode may be higher compared to the monopolar electrode, extreme care must be taken not to electrically injure the nerve. Electrical stimulation should commence at the lowest intensity level and gradually increase until a small response is achieved. Then the stimulus intensity is further increased very slowly until a just supramaximal CMAP is attained. Since a supramaximal CMAP represents the summation of the action potentials generated by all of the muscle fibers, only this type of response is reliable for comparison and measurements. During intracranial stimulation of the facial nerve, the stimulating electrode must not rest in a pool of fluid that would serve as a good conducting medium, such as an irrigating saline solution. Otherwise, the electrical current may tend to disperse and excite other tissues. The trigeminal motor nerve can be inadvertently stimulated at times, and this could superficially resemble facial muscle contraction. Additional electrodes placed over the trigeminal-innervated muscles (e.g. temporalis or masseter) will help distinguish between facial and trigeminal nerve stimulation.

During intervals when the facial nerve is not being stimulated, the oscilloscope display channels are set in the "free-sweep" mode. The purpose of this setup is to monitor any EMG burst activity in the facial muscles that may arise as a consequence of the operative manipulation. Mechanical stimulation of a nerve may originate from traction, compression, or worse, section of the nerve during surgery. The nerve may also be thermally injured during electrocautery.

Thus, when EMG bursts are noted in the free-sweep recordings, this observation may signify that the nerve has been damaged. Hence, it is essential that the facial nerve be electrically stimulated from time to time during surgery and the CMAPs recorded to determine if partial damage has occurred. Recording equipment that has a sound (speaker) system is preferred. This provides audio feedback of the muscle potentials to the surgeon and clinical neurophysiologist in addition to the visual display on the oscilloscope.

General Considerations

Intraoperative neurophysiologic monitoring is a combined team approach among surgeons, anesthesiologists, and clinical neurophysiologists. The type of anesthesia used during surgery should be discussed. During facial nerve monitoring, a neuromuscular blocking agent should not be administered. If the patient was neuromuscularly paralyzed during induction of anesthesia, the neuromuscular blockade should be completely reversed prior to facial nerve stimulation. Inhalational anesthesia and intravenous narcotic do not affect the recording of facial CMAPs. However, if additional electrophysiologic monitorings are required such as somatosensory evoked potentials (SEPs), the choice of general anesthesia is important. Certain types of inhalational anesthesia affect the cortical SEPs,[4] and these may significantly reduce the size of the evoked responses.

Preoperatively, the monitoring procedure should be fully explained to the patient. If the patient clinically has shown some weakness in the facial muscles due to an intracranial pathology, a preoperative recording should be performed to serve as a baseline for future studies.

Clinical Application

The following case illustrates the application of the above recording technique. A 57-year-old woman had a large right glomus jugulare tumor which extended into the mastoid, middle and inner ear regions, and into the intracranial compartment. Clinical examination revealed a right hearing loss and a right vocal cord paralysis. Facial movements were symmetrical, and there was no weakness. She had an embolization procedure for the vascular tumor. This was followed by surgical removal of the tumor mass. During surgery, she had a combined otological and neurosurgical approach to removal of the tumor. The first part of the operation involved a right radical mastoidectomy with transposition of the facial nerve. This was followed by a posterior fossa craniectomy and excision of the glomus tumor.

During the operative procedure, the functional integrity of the right facial nerve was determined intermittently through extracranial or intracranial stimulation of the nerve, and the facial CMAPs were recorded. Figure 1 is an example of the recordings from intracranial stimulation of the facial nerve; this was obtained after the nerve was released and ready for transposition. Figure 2 shows the EMG burst activities from the facial muscles during drilling of bony structures near the facial nerve; the recording channels were set in the free-sweep mode. The ap-

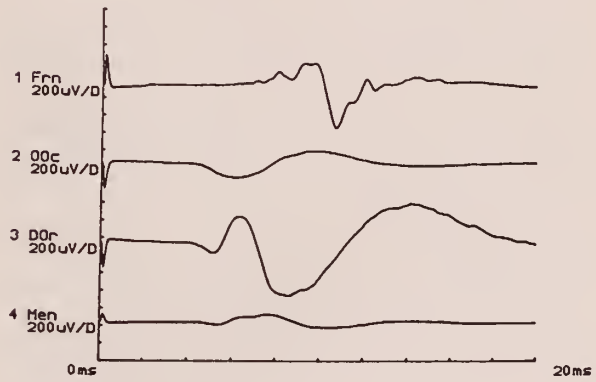


Figure 1. Facial compound muscle action potentials (CMAPs) obtained during electrical stimulation of the facial nerve intracranially. The CMAPs were recorded simultaneously during nerve stimulation from four different facial muscle groups: frontalis (Frn), orbicularis oculi (OOc), orbicularis oris (OOr), and mentalis (Men).

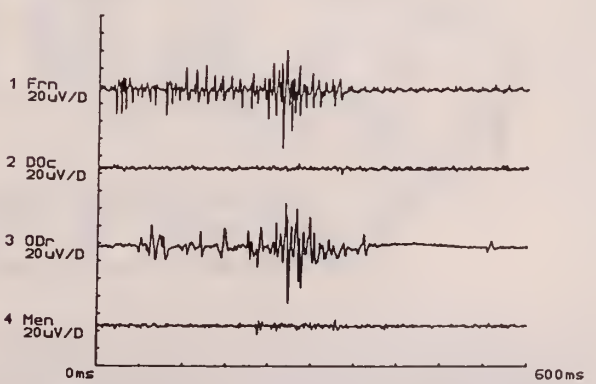


Figure 2. This "free-sweep" recording was obtained during operative drilling of bony structures near the facial nerve. Bursts of EMG activities are noted in the frontalis and orbicularis oris muscles (first and third channels). The nerve fascicles to these two facial muscles may have been mechanically excited during the drilling procedure.

pearance of EMG bursts suggested that the facial nerve may have been mechanically excited by the vibrations induced by the drill, or perhaps by tiny bone fragments propelled by the drill. On several occasions during the entire surgical procedure, EMG bursts were noted. These were frequently present in the frontalis and orbicularis oris muscles. Although the facial nerve was still structurally intact and electrically excitable, the presence of these EMG bursts during surgical manipulation prompted the suspicion that some degree of nerve damage might have been induced. There was also some reduction in the amplitude of the facial CMAPs during subsequent electrical stimulation of the facial nerve. In the immediate postoperative period, the patient indeed developed a mild right facial paresis, as had been suspected. The weakness was relatively more pronounced in the muscles of the forehead and around the mouth, correlating rather well with the EMG burst activities seen intraoperatively from the frontalis and orbicularis oris muscles. The patient, however, could still completely close the right eye, and we were relatively satisfied that this important facial motor function was spared. Follow-up examination two months later showed some improvement in the facial movements. Six months after the operation, the facial weakness had resolved completely. Part of the weakness may have been related to nerve demyelination without actual disruption of the axons. Recovery of nerve function from a predominantly demyelinating pathology is usually faster when compared to an axonal injury. The latter requires nerve regeneration or collateral sprouting, a repair process that can be both prolonged and incomplete. ★★★

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Obstetrics and Gynecology Grand Rounds
Clinical Case Management XVIII:

Oral Contraceptive Pills. Part I: Formulations, Selection and Common Side Effects

CYNTHIA L. LASSITER, M.D.
G. RODNEY MEEKS, M.D.
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Editorial Note: This article is written in a question and answer format with Dr. G. Rodney Meeks asking the questions and Dr. Cynthia L. Lassister answering.

What exactly is the pill?

"The Pill" is not a single entity but may be any one of at least 30 different estrogen-progestin formulations currently available in the United States. Most OCP (Oral Contraceptive Pills) contain both estrogen and progestin and thus are known as combination pills. Some OCP contain only progestin and are commonly called mini-pills.

What are the different formulations?

One of two estrogens is present in every combination OCP. One is ethinyl estradiol, which is roughly 20 times as potent as diethylstilbesterol. The other is mestranol, the 3-methyl ether of ethinyl estradiol. Ethinyl estradiol binds directly to target organ receptors while mestranol requires demethylation to ethinyl estradiol in the liver. Approximately 50% of mestranol is metabolized to ethinyl estradiol. This may explain why ethinyl estradiol is roughly twice as potent on a weight-per-weight basis. Unconjugated ethinyl estradiol, therefore, is the active estrogen regardless of combination pill selected. All of the "low-dose" pills contain ethinyl estradiol.

One of five progestins is utilized. All are related to ethisterone, a derivative of testosterone. Removal of the 19-carbon from ethisterone produces norethindrone, and changes the major hormonal effect from that of an androgen to that of a progestin. Some degree of anabolic and androgenic potential always remains however. These progestins are designated as 19-nortestosterones denoting the missing 19-carbon.

Norethindrone and norgestrel are the most commonly used progestins because they bind directly to receptors. Norethindrone acetate, norethynodrel, and ethynodiol diacetate must be metabolized to norethindrone. Norethynodrel is not currently used in any OCP containing less than 0.05 mg of estrogen. Norgestrel has an ethyl group substitution which enhances potency and which results in a racemic mixture. Only the levo-isomer is active. Potency of the progestins is considerably more variable than the estrogens.

What types of pills are available?

The pills may be divided into combination pills and progestin-only pills. Combination OCP are divided into fixed dosage and incremental dosage. The incremental pills may have two or three phases in which hormone content varies.

Why are currently available formulations called low-dose pills?

Five to 10 times less estrogen and progestin are present in OCP now than in the 1960's and early 1970's. Thus, the pills are called "low-dose" because of the lower hormone concentration. The

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lower hormone content has reduced the frequency of serious complications.

What are features of fixed dosage OCP?

The fixed dosage pill is also called monophasic OCP. Each of 21 active pills for a given OCP contains the identical ratio of hormones (see Table 1). Monophasic oral contraceptives, first available in the 1960's, are still widely used. The majority of OCP are in this category as are the generic OCP. The primary advantage of monophasic pills is greater margin of error compared with the incremental pill.

TABLE 1
MONOPHASIC FORMULATIONS

	E (mg)	*P (mg)*
Ethinyl Estradiol/Norethindrone		
Ovcon 35	0.035	0.9
Brevicon	0.035	0.5
Modicon	0.035	0.5
Ortho Novum 1/35	0.035	1.0
Norinyl 1 + 35	0.035	1.0
Ovcon 50	0.05	1.0
Mestranol/Norethindrone		
Ortho Novum 1/50	0.05	1.0
Norinyl 1 + 50	0.05	1.0
Ethinyl Estradiol/Norgestrel		
Nordette	0.03	0.15
Levlen	0.03	0.15
Lo/Ovral	0.03	0.30
Ovral	0.05	0.50
Ethinyl Estradiol/Ethynodiol Diacetate		
Demulen 1/35	0.035	1.0
Demulen 1/50	0.05	1.0
Ethinyl Estradiol/Norethindrone Acetate		
Loestrin 1/20	0.02	1.0
Norlestrin 1/50	0.05	1.0
Loestrin 1.5/30	0.03	1.5
Norlestrin 2.5/50	0.05	2.5

How does the incremental regimen vary from fixed dosages?

Incremental regimens may be biphasic or triphasic and were developed to mimic the peaks in steroid production occurring naturally during the menstrual cycle. Biphasic formulations attempt to mimic the normal cyclic pattern of progesterone. The progestin to estrogen ratio is decreased during the first half of the cycle which allows for greater endometrial proliferation. The increased ratio during the second half of menstrual cycle allows secretory development. In theory, the incidence of breakthrough bleeding and midcycle spotting should be reduced, however, reports indicate these problems still occur with biphasic preparations. Ortho-Novum 10/11® is a biphasic pill. The first 10 tablets are white and contain 0.035 mg ethinyl estradiol and 0.5 mg norethindrone. The next 11 tablets are peach colored and contain 0.035 mg ethinyl estradiol and 1.0 mg norethindrone (see Table 2).

How are triphasic OCP formulated?

Triphasic oral contraceptives, introduced in 1984, contain fixed or variable estrogen and variable progestin content, which changes over three portions of the cycle. The first phase has estrogen dominance to stimulate satisfactory endometrial development. The second phase has balanced levels of estrogen and progestin during midcycle for low breakthrough bleeding. The third phase has progestin dominance to provide additional endometrial support and conversion to a secretory pattern. Triphasics are designed to reduce total progestin intake levels below those delivered by low-dose monophasic OCP. Potential progestin effects, e.g., increased blood pressure, increased lipid levels, and alterations in carbohydrate metabolism therefore may be minimized. Decreased midcycle breakthrough bleeding has also been reported.

The first multiphasic that was introduced commercially in the United States was Ortho-Novum 7/7/7®. This provides 0.035 mg of ethinyl estradiol for all 21 tablets of the cycle with a trilevel adjustment in norethindrone dose. The increments are 0.5 mg for the first seven white tablets, 0.75 mg for the second seven light peach-colored tablets and 1.0 mg for the last seven dark peach-colored tablets. Tri-Norinyl® has a consistent 0.035 mg dose of ethinyl estradiol with a trilevel adjustment in the progestin dose. The first seven blue tablets provide 0.5 mg norethindrone, then 9 yellow-green tablets provide 1.0 mg and then 5 blue tablets provide 0.5 mg. Two other multiphasic OCP are available and vary the dosage of both hormones during the three phases. Triphasil®, during the first six brown tablets, provides 0.03 mg ethinyl estradiol and 0.05 mg of leveonorgestral, during the next five white tablets, provides 0.04 mg and 0.075 mg respectively and during the last 10 yellow tablets, provides 0.03 mg and 0.125 mg respectively. Tri-Levelen® is identical (Table 2).

What is the mechanism of action?

Both estrogens and progestins have multiple contraceptive sites of action. The most important is prevention of ovulation. Gonadotropin secretion is inhibited via effects on both pituitary and hypothalamus. Progestin primarily suppresses luteinizing hormone (LH) while estrogen suppresses follicle stimulating hormone (FSH) secretion. Cervical

TABLE 2
MULTIPHASIC FORMULATIONS

	Day of Cycle	*E (mg)*	*P (mg)*
Ethinyl Estradiol/ Norethindrone			
Ortho Novum 10/11	1-10	0.035	0.5
	11-21	0.035	1.0
Ortho Novum 7/7/7	1-7	0.035	0.5
	8-14	0.035	0.75
	15-21	0.035	1.0
Tri-Norinyl	1-7	0.035	0.5
	8-16	0.035	1.0
	17-21	0.035	0.5
Ethinyl Estradiol/ Levonorgestrel			
Triphasil	1-6	0.03	0.05
Tri-Levelen	7-11	0.04	0.075
	12-21	0.03	0.125

mucus under the influence of progestin becomes scanty, thick, and cellular. Ferning and Spinnbarkeit are decreased. Therefore, sperm entry into the uterus is more difficult. Progestin influences secretion and peristalsis of the fallopian tubes, thus interfering with sperm and ovum transport as well as fertilization. Alteration of the endometrium reduces likelihood of implantation.

How does the mini-pill vary from other pills?

The "mini-pill" contains only a low dose of progestin which must be taken continuously on a daily basis to provide contraception. It was also introduced in the 1960's but has limited application today. Ovulation is inhibited in only 10% of cycles, while disruption of normal ovulation and luteal function are seen in 50% of cycles. Ovulation and luteal function are normal in 40% of cycles. Changes in cervical mucus which make it impenetrable to sperm and alterations in the endometrium which make it unsuitable for implantation are primary actions. Since the dosage is very low, the progestin-only pill has very few side effects other than irregular bleeding.

How should one select an OCP?

Low-dose formulations are preferred. Both monophasic pills and multiphasic pills provide excellent contraception. Ethinyl estradiol dose should not exceed 0.05 mg; 0.035 mg or less is commonly recommended.

Previously, a great debate centered on selecting the best OCP for a given patient. For example, women with acne were given a more estrogenic OCP and women with fibrocystic disease needed a more androgenic formulation. Progestins dominant estrogens. This is especially true of the low-dose formulations. Thus, the concept of trying to select the ideal OCP would not now appear to be valid.

At what point do OCP provide reliable contraception?

Effective contraception is provided during the first pill cycle provided the pills are started no later then the fifth day of the cycle and no pills are missed.

What should a woman do if she forgets to take her pill?

If a woman misses one pill she should take that pill as soon as she remembers and take the next pill as usual. If she misses two pills she must take the pills as soon as she remembers and immediately begin using another method of contraception. If she misses three or more pills, she should immediately use alternate contraception, discontinue the pills, wait for menstruation, and begin a new OCP cycle package.

Can compliance be enhanced?

A major reason for the popularity of the 28-day pill package is that it contains a terminal 7 days of nonsteroidal pills. Additionally, most pill dispensers list day of the week and always, recommend that patients begin on the same day of the week. Often the Sunday following the onset of menses is recommended. These features are designed to enhance schedule compliance.

Can the pill provide postcoital contraception?

Postcoital contraception therapy must be initiated within 72 hours of unprotected intercourse. The following is one such regimen. Two OCP containing ethinyl estradiol 0.05 mg and levonorgestrel 0.5 mg (Ovral) should be taken immediately and two additional tablets should be taken 12 hours later. Because this high-dose regimen may cause nausea and vomiting, prophylactic use of antiemetics is recommended. Failure rates are reported to be as low as 2%.

Do adolescents have special needs?

Various writers have suggested that OCP may be given to adolescent girls of any age once they have had consecutive menstrual cycles ranging from 3 months to 20 consecutive months. Concern about the OCP interfering with maturation of the hypothalamic-pituitary-ovarian axis does not seem valid. Adolescent girls are notorious for non-compliance and are better started on a fixed-dose regimen since there seems to be a greater margin for contraceptive efficacy with missed pills. Medical principles are the same as for other age groups.

Have new recommendations been made regarding OCP use in women over age 35?

Most clinicians cease prescribing OCP to women when they reach age 35. While this practice seemed wise in the past, recent analysis of data do not support

this practice. Avoidance of OCP use is no longer valid for women of older reproductive age who are otherwise healthy and who do not smoke cigarettes. Increased cardiovascular risk in OCP users of older reproductive age is based on early data involving formulations containing higher doses of estrogen and progestin than those in use today. In addition, early studies included patients who would not receive OCP with today's more stringent prescribing criteria. A recent long-term cohort study of women without cardiovascular risk factors who used OCP containing 0.05 mg estrogen or less showed no increased risk for myocardial infarction or cardiovascular accidents in healthy, nonsmoking women between 35-45 years of age.

What are common side effects?

Possible side effects when initiating OCP include breakthrough bleeding, nausea, breast tenderness, and change in menses character. These minor side effects are common and are often the reason for discontinuation of OCP and/or lack of compliance.

How common is breakthrough bleeding?

The most common side effect is breakthrough bleeding, especially with low-dose formulations.

How can it be managed?

The woman should be encouraged to persist for three months as it often resolves in subsequent cycles. If forewarned, most women will tolerate such breakthrough bleeding initially. This bleeding represents tissue breakdown as the endometrium adjusts from its usual thick state to the relatively thin state allowed by the low concentration of hormones in the pill. Inquires should be made about missed pills and about the time of day at which the pill is taken. The most common cause of such bleeding is missed pills or pills which are taken at irregular times. Gastroenteritis and use of other drugs, especially antibiotics, may cause poor absorption or altered metabolism of OCP which allows breakthrough bleeding, and decreased contraceptive effectiveness.

What approach should be taken if breakthrough bleeding occurs with long-term use?

If bleeding occurs just prior to end of the pill cycle, the patient can stop the pills, wait 7 days and start a new cycle. If breakthrough bleeding is prolonged or aggravating, control of bleeding can be achieved with a short course of exogenous estrogen. Conjugated estrogens 1.25 mg to 2.5 mg or ethinyl estradiol 0.02 mg is administered daily for 7 days when the bleeding is present. Usually one course is curative. While recurrence is unusual, if it does happen, another 7-day course of estrogen is recommended. Often the best time to administer supplemental estrogen is during the 7 pill-free days, because no progestin is present to interfere with estrogen effect. Bleeding uncontrolled by this regimen should be investigated for endometrial pathology by an appropriate sampling technique.

Could the patient take 2 or 3 pills at once to stop the bleeding?

This regimen is not effective. The progestin component will always dominate. Doubling the number of pills will also double the progestational impact with its decidualization and atrophic effect on the endometrium.

Does amenorrhea indicate pregnancy?

Even in the most compliant OCP user, spontaneous ovulation may occur in approximately 0.3% of users per year. Thus, pregnancy must be excluded because of the risk of exposing the fetus to contraceptive steroids. Reports have associated vertebral, anal, cardiac, tracheal, esophageal, renal, and limb (VACTERL) abnormalities with early OCP exposure. The risk is at the verge of detectability, indicating a great margin of safety. Nevertheless, amenorrhea is generally due to a relative estrogen deficiency or progestin dominance which decreases withdrawal endometrial breakdown. Treatments include adding estrogen to the formulation, changing to a less active progestin, and lowering the progestin dose. Even a few hours of spotting during the expected menstrual days may be viewed as a normal OCP period.

What causes nausea and vomiting? Can they be controlled?

Nausea and vomiting are directly related to estrogen content, and may be reduced by taking OCP with the evening meal or at bedtime so that the peak hormone concentration occurs during sleep. Symptoms usually diminish after the first cycle. If nausea persists beyond the third cycle of therapy, estrogen content should be reduced.

How common is edema, and weight gain.

Cyclic weight gain is associated with fluid retention secondary to estrogen, whereas acyclic weight gain usually is related to progestin-induced appetite increase. Lower-dose estrogen may reduce cyclic weight gain and edema. A less androgenic progestin may help with acyclic weight gain. Guidelines for weight gain management include: monitoring calorie

intake, increasing activity, and changing to OCP with lower progestin dosage.

What causes acne?

Acne is generally improved by taking OCP since estrogens decrease sebaceous secretions. However, some women find that their skin condition deteriorates possibly due to androgenic-effect of progestin. Norgestrel and ethynodiol diacetate tend to be more androgenic. If acne develops, pills should be replaced by ones containing norethindrone or estrogen content may be increased. Other etiologies of androgen excess should be excluded. Standard treatments, such as broad spectrum topical and systemic antibiotics, dietary changes, soaps and skin cleaners, and specific anti-acne medicine, like tretinoin may be needed in some women.

Many women develop breast symptoms. How can these be managed?

Breast discomfort, tenderness, or fullness is commonly related to estrogen content of OCP and will often be relieved by reducing estrogen or by increasing the progestin dose (e.g., changing from a triphasic to a monophasic pill). Eliminating methylated xanthines (coffee, chocolate, tea) from the diet as well as reducing breast stimulation, such as jogging or sexual activity, during times of discomfort may alleviate symptoms.

Why do some women develop chloasma?

Estrogen increases the production of melanocyte stimulating hormone (MSH) and progesterone enhances its release. Some authors site chloasma as an indication to discontinue OCP use while others state that only if the chloasma is unacceptable, should the woman stop. Since the progestin-only pill contains a particularly low dose of progestin it may be a suitable alternative.

Summary

Development of hormonal contraception as a safe and effective means of birth control has evolved during the past 50 years. The first effective oral contraceptive pill was Enovid® which was introduced by Searle in 1960. Now, low-dose OCP are the most popular reversible method of contraception. Some 50 million women worldwide and 10 million in the United States utilize them. Understanding effectiveness, side effects, complications, and benefits has led to substantial changes in these preparations. Part II of this article will be printed in the future. It will address serious complications and health benefits. ★★★

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SPECIAL ARTICLE

What Is a Doctor's Relative Worth?

JANE M. ORIENT, M.D.
Tucson, Arizona

CONGRESS has decided that some doctors aren't worth nearly as much as they get paid. Their "inflated" fees are one of the primary targets of the Medicare budget-cutters. Prostate surgery, cataract surgery, coronary artery bypass, and total hip replacement are often given as examples of "overvalued" procedures.

On the other hand, some doctors think they don't get paid enough. Among these are internists, family practitioners, and pediatricians, who spend most of their time talking to patients and examining them. Insurance companies don't pay as much for an hour of conversation as for a few minutes of cutting or of manipulating a catheter or an endoscope. As a rule, patients are not willing to pay very much for a mere consultation either. Our society tends to place a higher value on technical skills than on "cognitive" ones. Patients seem to think that a new lens in their eye, an injection, or a sophisticated laboratory test is worth more than a clinical diagnosis or a piece of good advice (e.g., to stop smoking).

As an internist, I also think that I deserve to be paid more. And I suspect that some of those others deserve to be paid less. Unfortunately, none of the "proceduralists" have offered to share the wealth with me (and if they did, they might be accused of fee-splitting and sent off to jail). If I raise my fees too much, patients might decide to find another doctor. (In any event, physicians can't raise fees to Medicare patients above the government-imposed ceilings called MAACs or Maximum Allowable Actual Charges.)

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A voluntary solution to this perceived maldistribution of income does not seem possible. So what is to be done? Enter the government and its helpers, who promise to devise a "fair," if coercive, solution.

How Many Blood Pressure Prescriptions Are There in One Hernia Operation?

For a mere two million dollars, the Health Care Financing Administration (HCFA) and several foundations have funded a study that could revolutionize the way that physicians are paid. Researchers have developed the resource-based relative value scale (RBRVS), which assigns a "value" to each medical service in terms of its cost in "resources," relative to other services. For example, an "office visit, limited service, established patient" to an allergist is worth 62 RBRV units, whereas a "repair of an inguinal hernia, age 5 years or over" is worth 476 and an "initial history and physical examination related to the healthy individual, including anticipatory guidance; adult," if done by an internist, is worth 114.[1]

Researchers at the Harvard School of Public Health, under the leadership of health economist William Hsiao, arrived at these figures by a complex process that started with calling a number of doctors on the telephone. The researchers wanted to determine the amount of time required to perform various services, and also the intensity of the effort required. How much skill was needed, and how much stress was involved? The doctors were asked to consider a "reference" procedure, such as a follow-up visit with a 55-year-old man on two types of blood pressure pills, and compare it with other services that

they might provide. For example, the doctor might say that an intermediate telephone consultation with a patient who has a rash takes one-fifth as much physical effort but 10 times as much diagnostic acumen as seeing the man with high blood-pressure. Refining the information, researchers accounted for "intraservice," "preservice," and "postservice" work. Also entered into the final equations were overhead costs, including malpractice insurance and the cost of the required training.

Weighting the Scales

Some Physicians (usually "proceduralists" by specialty) argue that the study was biased from the beginning. HCFA wanted the outcome to favor "cognitive" instead of "procedural" work, so they chose a study group that had previously reported the desired findings. Apparently, HCFA got what it was paying for.

The Harvard group also has been accused of violating one of the fundamental rules of scientific research. The researchers failed to specify in advance the method to be used for normalizing the rankings across various specialties ranging from allergy to psychiatry to plastic surgery. Ophthalmologist Robert Reinecke, MD, of Thomas Jefferson University Hospital, thought that Hsiao's group might have withheld the details in order to prevent some specialists from jury-rigging the rankings to beat the system. However, in response to queries at an informational meeting in Dallas, the project directory for the Hsiao study stated that the methodology had not been worked out, and that the researchers planned to try different formulae *until the data* looked right. In other words, the researchers could manipulate the methodology until the calculations supported their predetermined conclusions.[2] The results could then confirm the Statistician's Law: "If you torture the data long enough, it will confess."

Although the rankings passed statistical tests for reliability, many of them failed the test of common sense. For example, ear, nose, and throat specialists noted that the removal of one lobe of the parotid (salivary) gland, a fairly simple procedure, had the same relative value as an extensive and difficult cancer operation. Obstetricians noted that a simple diagnostic D&C was assigned a higher value of intensity per unit time than performing a hysterectomy or attending a patient during a difficult labor.[3]

Some specialists agree that certain procedures may be overvalued, but they argue that the resulting payments enable them to continue to perform services that are undervalued. For example, the fees for cataract surgery subsidize medical treatment of glaucoma, a time-consuming service. Lowering the fees for cataracts might make it impossible for individual practitioners to survive, while high-volume "mills" take over the field. Similarly, reducing fees for D&C's might drive physicians to drop their obstetrical practice, because fees for delivering babies are inadequate to cover the malpractice insurance premiums. Price ceilings would also destroy doctors' ability to adjust their fees according to patients' ability to pay. Furthermore, they may become less willing to accept difficult cases.

A "Bait and Switch"?

Two strong boosters of the RBRVS, the American Society of Internal Medicine (ASIM) and the American Academy of Family Practice (AAFP), believe that the government has finally recognized the value of the "cognitive" services provided by their members. They have joined forces with a powerful lobby, the American Association of Retired Persons (AARP), to push for its acceptance.

The agenda of the AARP is clear, except perhaps to ASIM and AAFP. AARP leaders want to force physicians to work for the government for a fixed fee ("take assignment"). A ban on "balance billing" is the next step after the RBRVS. One impediment to this agenda is the perception that there are inequities in the current system of paying physicians. Once physicians agree to accept a system that is "fair," their case against a fixed-fee schedule is greatly weakened.

The government also might look favorably on the RBRVS, but not out of sympathy for beleaguered internists and family doctors. HCFA needs a cost-containment tool. At first, it may appear to physicians that many will increase their incomes substantially, even if at the expense of their colleagues. However, this pay increase might be a temporary effect. The dollar value of the payment is determined by multiplying the RBRV units by a conversion factor. The conversion factor could be lowered at will. Alternately, new measures to "control the inappropriate volume of care" (i.e. rationing) could be introduced. Increases in fees could be offset by disallowing claims on the basis that the service was medically unnecessary. In fact, such denials already occur. (For example, HCFA denied payment for an "unnecessary" electrocardiogram on a patient who had a cardiac arrest in the intensive care unit.)

Descriptions of the RBRVS appear overwhelming in their erudition and their complex algebra. In one's struggle to understand what is included in the

calculations, it is easy to overlook that which is left out: the value of a medical service to the patient.

Are all "office visits, limited service, established patient" of equal importance to the patient? The Harvard researchers never interviewed a single patient. If they had, a patient might have told them that some visits result in a lifesaving diagnosis or in relief of pain and anxiety. But some visits are for an expensive but purely optional diagnostic test, or for an opinion about a trivial problem. A hernia repair might allow a laborer to continue working. But the same hernia might not pose any inconvenience to a bedridden patient. A cataract operation might restore a patient's ability to live independently. But he might choose to have the second cataract removed only "because Medicare is paying for it," as one patient confided in me.

The Objective Versus the Subjective Theory of Value

The RBRVS considers only one side of the transaction. It equates the value of a service solely with the cost of its production. *Thus, it is based on an old idea: the objective theory of value, one of the fundamental tenets of Marxist economics.* (Of course, the objectivity of some of the costs — such as the estimate of "stress" — is purely a pretense.)

The objective theory of value is often taken as axiomatic. In fact, the critique of this theory in the 19th century by Austrian economists such as Eugen von Boehm-Bawerk represented a revolution in economic thinking — a revolution that has yet to affect the Harvard School of Public Health.

The subjective theory of economic value, proposed by the Austrian economists, recognizes that "the value of all goods is bound up with man and his purposes . . . " (i.e., not solely with the impersonal operation of market forces). "In its subjective sense, value denotes the significance which a good . . . possesses for the well-being of a certain subject."[4]

While goods do have an objective value, Boehm-Bawerk noted that this is not necessarily proportional to their subjective value:

Two cords of beechwood, for instance, possess equal objective fuel value. And yet one of them may be the only fuel supply of a poor family in a hard winter and absolutely irreplaceable because of their lack of money. It will possess a far greater subjective value for the satisfaction of that family's wants than will the other cord which is owned by a millionaire. And again, where wood is to be had in such abundance that it constitutes a "free good," it may very well have no subjective value for anyone's well-being at all, despite the fact that its "objective fuel value" remains entirely unchanged.[5]

In the subjective theory of value, the individual actor, the purchaser of goods and services, is the unit with which economics is concerned. *In private medicine, the individual patient with his own needs and values is the unit of practice.* The ranking of values varies with each individual, depending on personal circumstances and expectations. A person may be willing to make great sacrifices to obtain certain services, but will purchase others only if they are very cheap. For example, to one person cancer chemotherapy or surgery may seem a burden so great that the expectation of benefit may not be worth the price (either in money or suffering). To another, a small chance of cure may be worth any amount of pain and all of his worldly possessions. No third person can make a determination of the value of the service, even though its cost to the persons providing it may be exactly the same in the two instances.

According to the subjective theory of value, costs are basically *opportunity costs* incurred by a decision-maker, i.e., the value of the other goods or services he is willing to forgo in order to obtain the goods or services under consideration. Such costs must be borne exclusively by the person making the decision; they cannot be shifted to others. Nor can they be measured by others, since subjective mental experience cannot be directly observed. (However, the subjective value is reflected in the price that an individual is willing to pay.) Furthermore, costs are dated at the moment of final decision or choice.[6] Recalibration of a relative value scale, say every year, is far too slow to account for changes in the personal circumstances of the actors in any economic transaction.

The objective theory of value reduces both producer and consumer to interchangeable units in a collective. It is the stock in trade of the would-be central planners, who wish to control the practice of medicine, to standardize and depersonalize both medical services and patients. Hsiao sees the RBRVS as a mechanism by which (presumably omniscient) planners can redistribute physicians to areas of need and encourage or discourage certain types of practice or behavior.[7]

Some persons who support the RBRVS do so because they think the alternative proposals for paying physicians would be worse. The method favored by HCFA administrator William Roper is capitation: fixed payment by the head regardless of the number of services that a patient requires or demands. (This method — the *Kopfausschale* — was introduced in

Germany abut 1931).[8] Others propose to pay physicians a fixed amount according to the diagnosis, as hospitals are now paid, regardless of what treatment is provided.

Forgotten in the debates in the corridors of power are two individuals who might be able to arrive at a price for services without the need for a $2 million study: one doctor and one patient, making a voluntary agreement. The doctor knows what it costs to keep his office open and the opportunity costs of providing certain services. The patient knows the value of a service in his individual circumstances and how much he is willing and able to pay. But the ability of individuals to make voluntary agreements is becoming ever more circumscribed in our welfare state, as the planners gain control of the resources.

Like the leaders of the AARP and other lobbying groups, many persons today believe that the relative worth of an individual doctor is not one cent more than Harvard researchers calculate and the government pays.

In the past, similar methods of central planning and wage and price controls inevitably have led to distortions in the market, especially shortages.[9] After Hsiao and his colleagues figure out how many blood pressure prescriptions there are in a hernia operation, American health planners, like their Canadian counterparts, may be learning the calculus of rationing. The next questions will be like those featured in recent Canadian television specials: How many deaths on the waiting list for heart surgery equal a year of hemodialysis? How many clinic visits for preventive medicine equal a cataract operation? And at what age does the cost-benefit ratio for a pacemaker exceed what "society" is willing to pay? ★★★

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123rd Annual Session
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SPECIAL ARTICLE

Address of the President

J. Edward Hill, M.D.

I want to thank you for the hospitality and kindness you extended to Jean and me during my year as your president. The degree of warmness and enthusiasm with which we were accepted could only have taken place in this state.

It has been a most memorable year, a maturing year and one that allows introspective thinking and evaluations about us, as a medical society, and as individual physicians.

It has been a year that allows one to look at the medical profession from a different vantage point and to see the profession through the eyes of those not involved.

I saw good and I saw bad. As the Scottish poet Robert Burns said, "would that God would give us the gift to see ourselves as others see us."

I thank you for that opportunity, each of us should be so fortunate as to be able to experience a year in this position.

We began the year with two goals in mind. First, we wanted to promote the profession's image in our state. Second, we wanted to encourage the establishment of a comprehensive school health education program in our public school system. We have addressed both of these goals during the past year.

Our Council on Public Information began work right away and explored the idea of a doctor-public information project. They established a Media Awards Program which will be presented at this annual meeting. They continued to promote and offer our speaker's bureau to any wishing to utilize it. And they began work on a new project for better doctor-patient communication. Many of you will soon receive materials for patient communication that you can utilize in your offices. The stimulus for these new projects was the fact that we were told repeatedly by those outside the medical profession, particularly politicians, that we were not communicating well, on an individual basis, with our patients on issues that affected them. I recommend that we continue to study these projects and expand upon them.

In another effort to reach out positively to the public, our Senior-Care program, which was piloted last year, became a state-wide program. The program was successful enough that we recently received the Council's on Aging and the Mississippi Geriatological Society's highest award in the area of access to medical care for the elderly. It is my hope that we will continue cooperative efforts with the local Councils on Aging. I recommend that our Council on Public Information investigate the feasibility of a speakers bureau to address organizations of our elderly citizens on timely medical issues.

We have continued our negotiations concerning chronic care clinics with the Mississippi State Department of Health. This work, I hope, will not stop but will go forward until there are key clinics for indigent chronic care in every health department district in Mississippi, manned by MSMA members with resources provided by the Mississippi State Department of Health. I recommend that the Council on Medical Service work on this project through an *Ad Hoc* committee appointed specifically for this purpose.

As another important part of this effort, I also recommend that the Council on Medical Service join the State Department of Health in investigating the growing maternal care crisis in our state and arriving at recommendations for solutions to the crisis.

During the past year we took important, though not final, steps toward implementing our Medical Care Hot Line for indigent and non-emergency care. This program, you will recall, would provide a way for

President of the MSMA, 1989-90.
Presented May 31, 1990 before the House of Delegates, 122nd Annual Session in Jackson, MS.

Mississippians without any kind of health coverage to obtain a physician for an evaluation when needed for a non-emergency condition. Enabling legislation was sought during the recent legislative session and we were fortunate enough to have our bill passed and signed by the Governor. Unfortunately, we are without adequate funding at the present time to operate the program. I recommend that we continue to seek implementation of this program.

Possibly the most exciting part of the year for me, as we tried to reach our second major goal to promote a comprehensive school health education program, was the great strides we made in this endeavor. This was a cooperative effort between your State Medical Association and our MSMA Auxiliary.

We got off to a good start by establishing a network of School District Medical Advisors. The network is just beginning its work but we hope to expand and organize it into an effective mechanism for promoting health education.

We had a very successful workshop for these medical advisors sponsored by the Central Medical Society and your State Medical Association in March. We received significant support and resources from the American Medical Association in this endeavor.

Then on April 26 of this year, we had an all-day symposium presented by the Mississippi State Medical Association and the MSMA Auxiliary and directed towards a school related audience of, superintendents, school board presidents, school health nurses, and others involved in health education.

The symposium was a resounding success with outstanding speakers and a statewide audience of school administrators.

It was announced at the meeting that House Bill 1019, a bill we had vigorously supported, had been signed by the Governor. This act, you will recall, authorizes the State Department of Education to develop and administer a comprehensive school health education program as part of the school curriculum. I hope that this is just the beginning of our promotion of school health education. I recommend that the recently appointed School District Medical Advisors become a section of our annual meeting similar to the Young Physician Section.

I am convinced that we have made great strides this year in our efforts with the state legislature. We had the best year, in my memory, as we introduced four bills, three of which were signed by the Governor. We supported much other successful legislation and were able to effectively defeat legislation that would adversely effect the public.

However, our most important accomplishment this year was building a network of friends in the legislature. I have received numerous correspondence concerning our legislative activity. This correspondence was from legislators who praised our professionalism, our knowledge level, and our understanding of the issues.

We should build on these strengths. We should establish a constant and dynamic grassroots force in Mississippi. It should address coalition building, legislative rapport, and building and strengthening statewide communications. We must be involved as an organized medical profession in all local, state and national elections. I recommend that our Council on Legislation and Mississippi Medical Political Action Committee continue to implement a key contact network of local interested MSMA members and their spouses who will serve and be identified as grassroots political activists. Our annual legislative reception should be utilized as a function of the network and representatives of the network should join with other officers of the association in annually visiting our congressional delegation in Washington.

On another topic, I share the concern expressed by several past presidents in regard to our component medical society's interest and level of involvement in MSMA. One of the more understandable, but frustrating aspects of the state medical associations president's, has been the relatively poor participation of our members at component medical society meetings and activities. Over the past three years, endeavors have been attempted to stimulate more interest in participation, but without much positive outcome.

It is my opinion that the component society secretary is probably the key to improving activities and participation in organized medicine. We made an effort to have a special orientation session for component medical society officers at the January House of Delegates meeting. The session had to be canceled due to lack of attendance. However, I still believe the key to involvement of the local society level is through the component society's secretary and officers. I recommend that we continue to offer an orientation session for component society officers at annual sessions of the associations. I also recommend that every component society be urged to invite their board of trustees' representative to a meeting of the society at least once a year to present information about MSMA's activities.

On another organization matter, I think we should be greatly concerned that our state appears to be experiencing an increasing out-migration of physicians. I say "appears" because we have just begun to look at some preliminary data on this. Our investigation of this matter will continue. If current appear-

ances prove factual, I recommend that our association determine why this is occurring.

It has always been a concern of mine, that even though communications were adequate, intra-organizational communication has not been as good as it should be. In order to improve this communication level, I believe each council should have a co-chairman who is a member of the board of trustees.

In closing I would like to make several observations and recommendations specifically concerning our MSMA Councils and Committees.

The Council on Medical Services has a significant volume of important material that it must deal with. The council can only give minimal attention to the many important topics it handles due to time limitations and number of participants. I recommend that the Council on Medical Service be expanded into subcommittees on an *Ad Hoc* basis. This would provide more areas of specific interest for members to participate.

Our Council on Medical Education has done an excellent job and continues to foster ideas that will enhance physician education and competence through a CME involvement with hospital medical staffs.

The question has been repeatedly asked, "What are the most important professional educational needs for physicians in our state?" The specific answer to this question has eluded those interested, possibly because interest has been focused on perceived needs and not real needs.

My perception is that the specialty societies can handle professional education endeavors for their members much more adequately than we as a state medical association. Instead of devoting our education efforts to specific specialty-oriented disease topics, it would appear that we need to approach education from a different vantage point.

The Mississippi Foundation for Medical Care (our PRO) certainly has data that can pin-point where an educational or re-educational need lies. The Medical Assurance Company of Mississippi and the St. Paul Insurance Company, certainly can tell us where the greatest liability dangers are. Our Mississippi State Board of Licensure can give us insight into where our professional weaknesses are. I recommend that our Council on Medical Education develop a plan for focused CME based on identified needs of Mississippi Physicians for presentation to this House of Delegates at the 1991 Annual Session. Next, I wish to identify, not for my benefit, but for the benefit of those who will follow me in this office, the commitment of time and resources it requires. Many national and state medical societies now recognize this by providing a stipend to their presidents. I recommend that our Board of Trustees study the feasibility of our doing this and present a report in this regard for the House of Delegates' consideration.

It has been perplexing to me to see absenteeism at meetings of councils of our association and to hear that there are those who want to serve but have no position. I would therefore like to recommend that our bylaws be amended to provide that if any council or board member misses more than two successive meetings without permission of the chairman, they be automatically replaced by appointment for the remainder of their term of office.

Finally, many of you have joined me in questioning whether our current nominating process could be improved. This morning the current process will provide that we have an almost informal caucus at the District Medical Society level and a nominating committee representative will be elected. That individual may do a good job or may do nothing in seeking qualified and interested individuals to serve on our councils, committees, and as our officers and trustees. I believe that we need to improve and mature our system of elections. I also believe that current procedure for two or more persons to be nominated for every office serves no useful purpose whatsoever and, in fact, results in a search for "warm bodies" instead of the best person for the job. I recommend that our current nominating process be changed to provide that our past seven MSMA presidents would serve as a nominating committee with the immediate past president as chairman. This committee would propose a single slate of officers, trustees and council members to the House of Delegates, recognizing that the prerogative of any delegate making a nomination from the floor would continue. I believe this process would improve the quality of our leadership and also give our past presidents a significant new role recognizing their knowledge of our association's needs.

In closing, I want to thank you, the House of Delegates, for your confidence and for the opportunity you have given me to serve.

★ ★ ★



THE PRESIDENT'S PAGE

J. ELMER NIX, M.D.

Medicine and Money in Mississippi

My attention was recently called to an article in the *Mississippi Business Journal*. This article was written by my next door neighbor and friend, who is not particularly connected with medicine in any way, other than being my neighbor. The article points out that a lot of money is flowing out of Mississippi through patient referrals to "out of state" physicians and medical facilities. It has been estimated that we have a one billion dollar annual drain of money from Mississippi's economy due to our referring patients to out of state medical facilities. The overall message is a clear one — this practice is draining Mississippi of needed dollars, and we physicians should feel compelled to analyze this situation. We must practice "the highest quality medicine" but we must not forget our social and economic obligations to our friends, neighbors, and all fellow Mississippians.

Medicine is a big business today and has a major impact on the economy. Too many Mississippi dollars are flowing into Memphis, Birmingham, Mobile, New Orleans, and other cities, when there are equal or better facilities and personnel available within this state. We physicians have an obligation to help stem the flow of money out of our state.

Some individuals are going to continue to go to Memphis, New Orleans, etc. for their medical care simply because it is more convenient. However, one can drive from Batesville to Jackson in about the same amount of time that he can drive to a downtown hospital in Memphis. The trip from Lucedale to Mobile takes just as long as the trip from Lucedale to Hattiesburg. When we have excellent medical centers available in Tupelo, Jackson, Hattiesburg, and other areas, why are we referring so many Mississippi patients to Memphis, Mobile, and New Orleans? Not only does this take money out of our state, it also is more expensive and inconvenient for our patients.

Many out of state physicians and hospitals charge more than Mississippi physicians and hospitals for comparable services. According to a survey done in 1988, the average hospital charge per day in Mississippi was $527.00 whereas it was $791.00 in Louisiana, $754.00 in Alabama and $649.00 in Tennessee. I suspect

(Continued on page 269)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION
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AUGUST 1990

Tobacco and Health Care Cost

It was in the mid 1930's that Dr. Alton Oshner first hypothesized that cigarette smoking causes lung cancer. Since that time, a huge body of evidence has been gathered to support that hypothesis, while millions upon millions of Americans (not to mention people of other countries) have continued to suffer and die from tobacco-related illnesses at untold costs to these individuals as well as to society.

Isn't it interesting that with all the concern about excessive health care costs and the containment thereof, no significant attention is being paid by government to the largest contributor to those costs. A solution to the tobacco problem would probably solve the cost problem and at the same time improve immensely the quality of life for all our citizens.

It was encouraging to note the passage of several tobacco-related resolutions at the recent MSMA convention. Hopefully, organized medicine can take the initiative, and "put the pressure" on government to take responsible action to reduce costs in this logical and positive way, that is, by a broad-based effort to eliminate the use of tobacco in this country. The time has come to get serious about tobacco, and physicians should lead the charge.

GEORGE E. ABRAHAM, M.D.
Associate Editor

PRESIDENT'S PAGE

(Continued from page 268)

physician charges are correspondingly higher than ours in Mississippi also. The hospitals in Mississippi are just as good as those out of state, and we Mississippi physicians certainly have had comparable education to those in other states. Of course there are going to be some specialized services that are available at only a few medical centers and occasionally there is a physician with some special expertise that we do not have in Mississippi. When these are needed, we certainly should continue to refer our patients to those places. I certainly am not advocating any sacrifice of quality, for economic reasons. I am, however, strongly advocating that we take a "second look" at our referral practices — and then make any appropriate changes.

We do not have much money in Mississippi; let's try to keep what we have. The medical facilities and personnel in Mississippi are more than adequate for the vast majority of medical conditions. I submit that we should (1) continue to practice the highest quality medical care by treating our Mississippi patients in Mississippi and (2) make efforts to bring to Mississippi those areas of expertise where we are currently lacking. In our attempts to be the patient's advocate, let us also be advocates of our friends, neighbors and Mississippi.

Medico-Legal Brief

Hospital Allowed to Require Malpractice Insurance

A hospital did not act arbitrarily in amending its bylaws to require staff members to carry individual malpractice insurance, a Georgia appellate court ruled.

At its regular meeting on June 27, 1984, the hospital passed a resolution requiring all members of its medical and dental staff to have $1 million in malpractice insurance. Proof of coverage was required to be provided at the time of appointment or reappointment to the staff. A physician who was denied staff privileges because he could not prove that he had malpractice insurance filed suit challenging the va-

lidity of the requirement. A trial court granted summary judgment in favor of the hospital, and the physician appealed.

Affirming the decision, the appellate courts said that the reasonableness of the malpractice insurance requirement has been upheld in all jurisdictions in which it arose. The courts said it saw no good reason to oppose this trend. Part of the responsibilities of a hospital was to insure that an adequate, competent medical staff served the patients in the hospital. The hospital was authorized to prescribe the qualifications of the physicians it admitted to practice in its facility, the court said.

Even if the hospital's insurance company was the instigator of a nationwide policy requiring staff members of its insured hospital to secure individual malpractice insurance policies, there was no evidence showing that the hospital illegally delegated any of its supervisory authority. Passage of the resolution was a rational and thoroughly debated decision unanimously made by the hospital's Board of Trustees with no apparent input from the insurance company, the court said.—*Stein v. Tri-City Hospital Authority*, 384 S.E. 2d 430 (Ga.Ct. of App., July 5, 1989; rehearing denied, July 13, 1989; cert. denied, Ga.Sup.Ct., Sept. 29, 1989)

Top Health Related Professions Graduate at UMC



Charles Michael Williamson of Oakdale, seated center, received the Dr. Virginia Stancil Tobert Award as the outstanding health related professions student in the graduating class at the University of Mississippi Medical Center in Jackson. Williamson, who received a BS in physical therapy, also graduated summa cum laude. Commencement participants included Ole Miss Chancellor Dr. R. Gerald Turner, seated left, speaker Dr. Louis Sullivan, U.S. Secretary of Health and Human Services, seated right, and standing from left, UMC Vice Chancellor Dr. Norman Nelson, SHRP Dean Dr. Thomas Freeland, and Medical School Associate Dean for Academic Affairs Dr. Carl Evers, a past president of the Mississippi State Medical Association which sponsors the Tobert Award. Williamson is working at Methodist Hospital in Hattiesburg, MS.

MEDICAL ORGANIZATION

Dr. Guyton Presented AMA Scientific Achievement Award

The American Medical Association honored Arthur C. Guyton, M.D., with its Scientific Achievement Award. The presentation was made during the award ceremonies at the AMA's Annual Meeting.

Dr. Guyton has spent the last four decades studying the cardiovascular system, and has helped redefine this field of medicine. He is credited with providing a better understanding of congestive heart disease. He also defined the major role of the kidney in the control of arterial pressure.

Dr. Guyton's research is described in some 600 publications used by medical students throughout the world. He was instrumental in the development of a comprehensive computer model for the cardiovascular system while serving as chairman of the Department of Physiology and Biophysics at the University of Mississippi School of Medicine.

The Scientific Achievement Award is presented on special occasions in recognition of outstanding work. The Mississippi delegation to the AMA Annual Meeting hosted a reception in Dr. Guyton's honor after he received the award. This reception was made possible by contributions from graduates of the University of Mississippi School of Medicine who were former students of Dr. Guyton.



Mississippians attending the reception in honor of Dr. Authur C. Guyton, professor emeritus of Physiology and Biophysics UMC; during the AMA Annual Meeting include, from left: Dr. Guyton, Dr. Norman C. Nelson, UMC vice chancellor; Dr. J. Elmer Nix, president of MSMA; and Dr. Carl Evers, associate dean for academic affairs UMC.

Greenwood Native Receives Tolbert Award

Billy E. Mink, Jr., of Greenwood, a senior in the School of Medicine at the University of Mississippi Medical Center, received the Virginia Stancil Tolbert award, sponsored by the Mississippi State Medical Association, during honors day ceremonies at UMC for medical and graduate students. Mink, this year's president of the Associated Student Body at UMC, also received the Medical Student of the Year award as well as the Chris Allenburger memorial award in pediatrics. The Tolbert award is given annually to a medical student who has "demonstrated superior scholarship and leadership in campus activities" and exhibited an "interest in issues which affect the profession and willingness to devote time and effort to those matters."



Billy E. Mink, Jr., M.D., left, recipient of the Virginia Stancil Tobert Award is pictured with Dr. Norman C. Nelson, UMC vice chancellor, during honors day ceremonies at UMC.

UMC Announced Faculty Appointment

Seven have been named in faculty appointments in the School of Medicine and centerwide at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

School of Medicine appointments included Dr. Joel R. Slade, instructor in anesthesiology; Dr. Tina M. Benoit, instructor in medicine; Dr. Thomas H. Mosley, Jr., instructor in psychiatry and human behavior (psychology) and instructor in medicine (research); and Dr. Gail C. Megason and Dr. Sandra L. Frazier, instructors in pediatrics.

Centerwide, Dr. Robert J. Peace was named associate professor of pathology and Dr. Marsha J. Ness, assistant professor of pathology.

Dr. Slade earned the BSEE in 1979 at Rice University and the MD in 1982 at the University of Texas Medical Branch at Galveston. He took his internship at the University of Texas Southwestern Medical School at Dallas Affiliated Hospitals followed by a residency at Baylor College of Medicine Affiliated Hospitals at Houston. A former captain in the USAF Medical Corps, he was on the medical staff at USAF Hospital McConnell in Wichita, Kan. and the USAF Regional Hospital at Omaha, Neb.

Dr. Benoit earned the BS in 1982 at the University of Southwestern Louisiana and the MD in 1987 at Louisiana State University in New Orleans. She took her internship and residency at the University Medical Center in Lafayette. She was on the medical staff at the Walk In Clinic South and at the Lafayette Parish Health Unit in Lafayette, La.

Dr. Mosley earned the BS in 1983, the MA in 1987, and the PhD in 1989 at Louisiana State University. He took post graduate training at Southeastern Louisiana University and Louisiana State University Medical Center, Quality II and Earl K. Long Memorial Hospital in Baton Rouge, La., where he was chief clinical psychology extern and coordinator of medical consultation/liaison services from 1987-1988 and chief research assistant from 1985-1988. He also took an internship in clinical psychology at the UMC and did research at LSU and Southeastern Louisiana University.

Dr. Megason earned the ACS with honors in 1981 at the University of Southern Mississippi and the MD in 1985 at UMC, where she took her internship and residency. She has been on the medical staff of Minor Med Care, Kings Daughters Hospital in Brookhaven, Magee General Hospital, Garden Park Hospital in Gulfport and Memorial Hospital at Gulfport. She was on the medical staff at the Children's Clinic in Long Beach before her Medical Center appointment.

Dr. Frazier earned the BS in 1983, summa cum laude, at Millsaps College and the MD in 1987 at UMC. She took her internship and residency at the Medical Center.

Dr. Peace earned the BS in 1944 and the MD in 1948 at Tulane University. He took his internship at Touro Infirmary in New Orleans and residencies there and at the Anderson Hospital for Cancer Research in Houston, Tex. He served in the U.S. Navy from 1943-1954, when he was appointed instructor in pathology at Louisiana State University. He also has been a member of the faculty at Emory University and at the University of Tennessee at Memphis since 1972, where he was professor of pathology, community and allied health professions and clinical laboratory sciences from 1976-1983. He has been a pathologist at Charity Hospital in New Orleans, La., the Veterans Administration Hospital and Grady Memorial Hospital in Atlanta, Ga., Kings Daughters Hospital in Brookhaven, where he was director of laboratory medicine, Indiana University Hospital and Wishard Memorial Hospital in Indianapolis, Ind., and was a surgical pathologist, cytopathologist and managing director of cytopathology laboratories with Roch Biomedical Laboratories at Burlington, N.C. before his appointment to the Medical Center faculty.

Dr. Ness earned the BA in 1980 at Rice University at Houston and the MD in 1984 at the University of Texas Health Science Center at Dallas Southwestern Medical School. She took her residency at the University of Nebraska Medical Center at Omaha, followed by fellowships in surgical pathology and cytopathology at Baylor College of Medicine in Houston, Tex. before coming to the Medical Center.

AMA Moves to New Chicago Headquarters

The staff of the AMA will be moving into leased space in a new headquarters building in Chicago, beginning August 16.

Most of the AMA staff will move over an 11-day period and all will be in their new offices by August 27. Then, the AMA's mailing address changes to 515 North State Street, Chicago 60610. The general office phone number becomes (312) 464-5000.

Dr. Lee Rogers Serving As MSMA Board Chairman

Dr. Lee H. Rogers, a Tupelo ophthalmologist, was elected chairman of the MSMA Board of Trustees during the board's meeting held June 3 in Jackson.



Rogers received his M.D. degree from the University of Mississippi Medical Center. He served his internship at John Gaston Hospital and a residency in ophthalmology at Methodist Hospital both in Memphis, Tennessee. Dr. Rogers also did graduate work at Harvard University Medical School Boston.

Dr. Rogers is a member of the Northeast Mississippi Medical Society. He has served on numerous MSMA Councils and committees.

MSMA Annual Session 1990 Tennis Tournament

The 1990 MSMA Tennis Tournament featured strong, evenly matched competition. The tournament was hosted by the Country Club of Jackson. Club Tennis Professional, John Good, MTPA, ATP, administered the format. Medical Assurance Company of Mississippi sponsored the event, providing beverages, caps, and prizes for the participants.

The Ladies' Doubles featured close competition, with the first place team of Paula Rhodes and Janis Freeland narrowly nipping Nanette Weems and Sarah Lampton. The team of Brenda Spencer and Becky Nelson took third place honors.

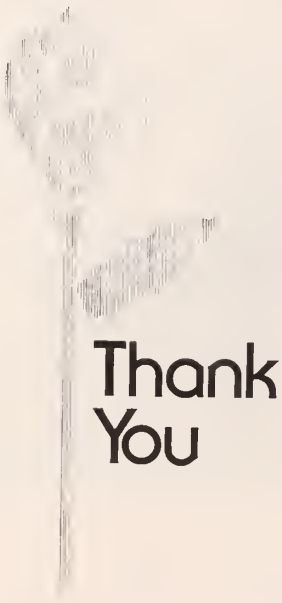
The Mens' Competition was placed in a round robin individual point system. Mitch Jones won the individual first place honors. John Purvis, M.D. took second place. Robert Rhodes, M.D. fell just one point behind and received the third prize.



The American Society of Anesthesiologist held their annual Washington Legislative Conference in May. Mississippians who attended are from left, T. Homer Horton, M.D., Tupelo; H. Clark Ethridge, Jr., M.D., Jackson; Clare H. Elliot, MSMA Director of Legislative Activities; Clinton Smith, M.D., Jackson, Director of the Mississippi Division of Medicaid, who was also a conference speaker; Candace E. Keller, M.D., Hattiesburg; and O. Fred Guidry, M.D., Jackson, Chairman ASA Committee on Government Affairs.



Mississippi was beautifully represented at the Annual Session of the AMA Auxiliary House of Delegates, June 24-27. Those attending as delegates, from left seated, are: Kathy Stumne, Kathy Carmichael, Merrell Rogers, Jean Hill, AMA-Auxiliary President, Nancy Lindstrom, Karen Stephens, and Sylvia Walker. Serving as Pages, standing from left, are: Linda Martin, Dottie Estess, Jo Waites, Rosemary Nix, Beth Hartness, Peggie Herrington, Roberta Barnett, Ruth Smith, and Sara Ann Owen.



Doctor,

Have you ever looked for a different way to say "Thank You," "Congratulations," or "Get Well Soon"?

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For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Karen Stephens, 1105 Oakleigh Dr., Hattiesburg, MS 39401; telephone 264-0154.

Auxiliary Gift to AMA-ERF Tops $2 Million



AMA Auxiliary President Jean Hill presented AMA-ERF President Lonnie Bristow, M.D., with a check for $2,050,350 and twenty-five cents during the opening ceremonies of the AMA Annual Session held June 24-27, in Chicago, IL. In his report, Dr. Bristow said the foundation had distributed $1.6 million in gifts to medical schools from funds collected in 1989, bringing the total distributed to $51 million in 39 years. Topping the $2 million mark was just one of the highlights of AMA Auxiliary President Jean Hill's term of office.

Jean Hill Completes Term of Office

"Let us continue to build on our successes to reach the goal we share in this and every year — to improve the health and quality of life for all people in this nation," said American Medical Association Auxiliary President Jean Hill in her final address to the organization's leaders and members.



Mrs. Hill's one-year term as president of the AMA Auxiliary, a volunteer organization made up of 70,000 physicians' spouses, ended June 27, 1990. During the year, she stressed the importance of unity within the medical community and of health education. Her term of office was marked by several auxiliary achievements: raising over $2 million for medical education; developing and sponsoring thousands of health education programs targeted at children, teens, adults, and older Americans; and promoting health-related legislation on such issues as the smoking ban on airline flights.

"A oneness of purpose and action has enabled us to do collectively what no one of us could do alone," Mrs. Hill said in her address. "By putting aside our differences, we have been able to affect positive change."

Married to Hollandale family practitioner J. Edward Hill, M.D., Jean Hill has served as the AMA Auxiliary president, president-elect, regional vice president, regional director, and as chairman of a number of committees.

Merrell Rogers Installed As President MSMA Auxiliary

Merrell Rogers is serving as the sixty-eighth president of the Mississippi State Medical Association Auxiliary. She was installed during the June Annual Session. Merrell is the wife of Dr. Lee H. Rogers, an ophthalmologist, in Tupelo. The Rogers have two children, daughter Sims is a freshman at the University of Mississippi and son Hart is a sophomore at Tupelo High School.



A registered dietician, Rogers received her B.S. degree from the University of Alabama in nutrition and dietetics. She completed her dietetic internship at Barnes Hospital, Washington University Clinics in St. Louis, Missouri. She is now consulting dietician for Methodist Senior Services of Mississippi and a guest nutrition columnist for the North Mississippi Daily Journal. A past president of the Mississippi Dietetic Association, Merrell is currently chairman of the executive director's committee.

Mrs. Rogers has served the MSMA Northeast Auxiliary as president, secretary, treasurer, and AMA-ERF chairman. She has also served as Lee County Auxiliary legislative chairman. At the state level Merrell has served as president-elect, third vice-president, parliamentarian, district III chairman, and convention co-chairman.

"The MSMA Auxiliary will continue it's current work on teen health, but we also want to focus on Legislation in this election year," said Rogers. "Our August Auxiliary workshop will cover all areas of membership, AMA-ERF, health projects and legislation."

Mrs. Rogers also expressed her desire for the auxiliary to continue its active role in support of MSMA.

Physicians Recognition Award

Twenty-seven MSMA members were named recipients of the AMA Physicians' Recognition Award during April, May and June, 1990. This award is presented by the American Medical Association to physicians who have voluntarily completed a minimum of 50 hours of continuing education within a one year period. Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours of CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1. These twenty-seven individuals are presented below by medical society.

Central
C. Ralph Daniel, M.D.
Carol E. Scott-Conner, M.D.
Paul E. Sheffield, M.D.
Eric K. Undesser, M.D.

Clarksdale & 6 Counties
Richard E. Waller, M.D.

Coast Counties
Thomas E. Benefield, M.D.
Phillip Saccoccia, M.D.
Craig M. Slater, M.D.

Delta Medical
Michael Cirilli, M.D.
Frank M. Tilton, M.D.

DeSoto County
Malcolm D. Baxter, M.D.

East Mississippi
Cheryl G. Clark, M.D.
Daniel R. Thornton, M.D.

Homochitto Valley
Leslie England, M.D.

North Central
Robert B. Townes, M.D.

Northeast
Linda Chidester, M.D.
John Mitchell Ford, M.D.
Kelly S. Segars, M.D.
Thomas L. Sweat, M.D.
Gaydon A. Tubbs, M.D.

North Mississippi
Horton G. Taylor, M.D.

Prairie
Robert K. Collins, M.D.

Pearl River
Don C. Rudeen, M.D.

South Central
Richard G. Burris, M.D.
Joseph C. Hillman, M.D.

South Mississippi
Jack C. Evans, M.D.
Charles A. Hollingshead, M.D.

NEW MEMBERS

Agnew, Samuel G., Jackson. Born New Orleans, LA, Oct. 22, 1958; M.D., Tulane University School of Medicine, New Orleans, LA, 1984; interned one year, Tulane Affiliated Hospitals; orthopaedic surgery residency, Medical University of South Carolina, Charleston, SC, 1985-89; elected by Central Medical Society.

Bishop, Andrew C., Jackson. Born Forest, MS, Sept. 30, 1956; M.D., University of Mississippi School of Medicine, Jackson, MS, 1982; interned one year, same; psychiatry residency, same, 1983-86; elected by Central Medical Society.

Breeland, Donna Glynn, Jackson. Born Canton, MS, Nov. 14, 1960; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; interned and ob-gyn residency, same, 1986-90; elected by Central Medical Society.

Butler, Harry Lyle, Hattiesburg. Born Eupora, MS, May 15, 1956; M.D., University of Mississippi School of Medicine, Jackson, MS, 1981; interned and medicine residency, Medical College of Georgia, Augusta, GA, 1981-84; oncology and hematology fellowship, University Medical Center, Jackson, MS, 1985-88; elected by South Mississippi Medical Society.

Crenshaw, Andrew H., Jr., Southhaven. Born Memphis, TN, July 5, 1951; M.D., University of Tennessee College of Medicine, Memphis, TN, 1982; interned Methodist Hospital, Memphis, TN, one year; surgery residency, same, 1983-84; orthopaedic surgery residency Campbell Clinic, Memphis, TN, 1985-87; elected by Desoto County Medical Society.

Dyess, Eric M., Meridian. Born Hattiesburg, MS, May 3, 1957; M.D., University of Mississippi School of Medicine, Jackson, MS, 1987; medicine and endocrinology residency, New England Medical Center, Boston, MA, 1987-89; elected by East Mississippi Medical Society.

Guess, Carol W., Gulfport. Born Marion, KY, Sept. 17, 1952; M.D., University of Louisville School of Medicine, Louisville, KY, 1979; interned, surgery and cardiothoracic surgery residency, Tulsa Medical College Affiliated Hospital, Tulsa, OK, 1979-84; elected by Coast Counties Medical Society.

Herrera, Guillermo A., Jackson. Born Havana, Cuba, March 16, 1952; M.D., University of Puerto Rico School of Medicine, San Juan, Puerto Rico, 1975; interned, anatomic and clinical pathology residency, Brooke Army Medical Center, Ft. Sam Houston, TX, 1975-79; elected by Central Medical Society.

Lundy, Robert B., Jackson. Born Greenwood, MS, Jan. 8, 1951; M.D.; University of Mississippi School of Medicine, Jackson, MS, 1977, interned and psychiatry residency, University of Mississippi Medical Center, Jackson, MS, 1977-78 and 1982-85; elected by Central Medical Society.

Moore, James D., Bay St. Louis. Born Russelville, AK, Feb. 25, 1936; M.D., University of Tennessee College of Medicine, Memphis, TN, 1960; interned one year, Jackson Memorial Hospital, Miami, FL; orthopaedic surgery residency, Campbell Clinic, Memphis, TN, 1964-67; elected by Coast Counties Medical Society.



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Northington, Monica L., Tupelo. Born Natchez, MS, Nov. 4, 1961; M.D., University of Mississippi School of Medicine, Jackson, MS, 1987; interned and public health residency, University of Tennessee, Memphis, TN, 1987-90; elected by Northeast Mississippi Medical Society.

Pace, Thomas B., Jackson. Born Jackson, MS, July 2, 1957; M.D., University of Mississippi School of Medicine, Jackson, MS, 1982; interned one year Greenville Memorial Hospital, Greenville, SC; orthopaedic residency, same, 1984-87; fellowship Princess Margaret Rose Hospital, Edinburgh, Scotland; elected by Central Medical Society.

Saultes, Robert, L., Jackson. Born Jackson, MS, Feb. 28, 1958; M.D., University of Mississippi School of Medicine, Jackson, MS, 1984; interned and medicine residency, Memorial Medical Center, Savannah, GA, 1984-87; elected by Central Medical Society.



Smith, William Robert, Jackson. Born Brookhaven, MS, Aug. 15, 1954; M.D., University of Mississippi School of Medicine, Jackson, MS, 1979; interned and medicine residency, University Medical Center, Jackson, MS, 1979-82; elected by Central Medical Society.

Turbat-Herrera, Elba A., Jackson. Born Havana, Cuba, July 26, 1952; M.D., University of Alabama School of Medicine, Birmingham, AL, 1985; interned and pathology residency, same, 1985-88 and one year Mount Sinai Medical Center, Miami Beach, FL; elected by Central Medical Society.

PERSONALS

Gene Barrett of Jackson presented a paper at the Southern Orthopaedic Society meeting in Maui, Hawaii. He was also a speaker on knee ligament injuries at the Osteopathic Association in Destin, Florida.

John M. Beaman of Richton recently attended a conference entitled "Eighth Annual Review of Modern Therapeutics" held in Huntsville, AL, by the University of Alabama.

W. Richard Boyte has associated with **Deborah T. Lee** and the Clinton Children's Clinic, P.A. for the practice of pediatrics.

Dudley Burwell of Biloxi has announced the opening of a satellite office at 11163 Highway 49 in Orange Grove.

Hale Byrd announces his association with the MEA Health Center South at 1777 Ellis Avenue, Jackson.

C. Ron Cannon has qualified for the American Academy of Otolaryngology/Head and Neck Surgery Honor Award, given in acknowledgement of contributions to Academy programs. He has also received a six year appointment to the Home Study Course.

C. Ralph Daniel, III recently gave a presentation on "Nail Disorders" at a Harvard/Columbia University dermatology symposium held in Boston.

William R. Eure of Bay Springs announces his retirement from the practice of family medicine.

Diane Ferguson has associated with **William H.**


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PERSONALS/Continued

McClatchy, J. Sloan Manning, and **Charles W. Parrott** in Southhaven.

Richard J. Field, Jr. represented the American College of Surgeons at the American Association of Pediatric Surgery meeting in Vancouver, British Columbia and the Washington State Chapter of the American College of Surgeons in Blaine, Washington.

John Gassaway of West Point led an open forum on arthritis and joint replacement as a part of the lunch time learning series at the Clay County Medical Center.

William G. Gillies of Magnolia announces his retirement from the practice of family medicine.

Charles R. Hogue was one of 250 physicians recently attending the Office Practice of Primary Care Medicine seminar held in Boston, Mass. sponsored by the Department of Continuing Education of Harvard Medical School.

Phil Hooker of West Point discussed "How to Prevent Wrinkles and Skin Cancer" as a part of the Clay County Medical Center lunch time learning series.

Maurice James of Jackson announces the relocation of his office to the St. Dominic West Medical Office Tower, 971 Lakeland Drive, Suite 661 for the practice of diseases and surgery of the eyes, retina and vitreous diseases.

Dewey H. Lane, David L. Spencer and **Clark G. Warden** announce the opening of an additional office at 20 Marks Road, Ocean Springs, for general, vascular and thoracic surgery.

Johnny F. Miles, Jr. announces his association with Gamble Brothers and Archer Clinic, P.A. for the practice of obstetrics and gynecology.

Luis F. Mosquera recently attended the World Congress of Endoscopic Surgery in Atlanta in conjunction with the Society of American Gastrointestinal Endoscopic Surgeons Annual Scientific Session and Postgraduate Course.

Robert Myers of Columbus recently presented a program on "Skin Cancer: To Tan Or Not To Tan" at Willowbrook Solarium.

Charles G. Pigott has associated with the Surgery Clinic of Tupelo, P.A. for the practice of General and Vascular Surgery.

Michael Roy Seals of Laurel has been elected to the Deposit Guaranty Bank, Laurel, advisory board.

Larry W. Sivils announces the relocation of his practice to 415 Highway 51 South Suite C, Victoria Station, Ridgeland for the practice of family medicine.

W. F. Stringer of Poplarville announces his retirement from the practice of family medicine.

Luther P. Stumme of Tupelo and the North Mississippi Neurology Clinic announced the relocation of their offices to 1038 South Madison in the Medical Arts Plaza.

Thomas L. Windham has associated with the Baptist Memorial Hospital north Mississippi, Oxford, in the practice of Neurological Surgery.

Sidney Wong of Gulfport announced the relocation of his practice to the Gulf Coast Nutrition Clinic, 12280 Ashley Drive.

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Information Sources

MSMA and MSMA Diversified Services — 735 Riverside Drive, Jackson, MS 39202; 601-354-5433 or 800-898-0251 (In-State Watts)

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In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript. — *The Editors.*

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Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia. Elevated serum potassium (>5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia. In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients.

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension. Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia. Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia. Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension, Patients on Diuretic Therapy. Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release. The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium. VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium. Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy – Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but if is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use. Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION. The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE. The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), pulmonary embolism and infarction, pulmonary edema, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis (hepatocellular or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth.

Musculoskeletal: Muscle cramps.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin: Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, hyperhidrosis.

Special Senses: Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing.

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgias/arthritis, myalgias, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

Angioedema. Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension. In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes. Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen. In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

Liver Function Tests. Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment. The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure. VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Patients with Heart Failure and Renal Impairment or Hyponatremia: In patients with heart failure who have hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486. J9VS61R2(819)

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For a Brief Summary of Prescribing Information, please see the last page of this advertisement.

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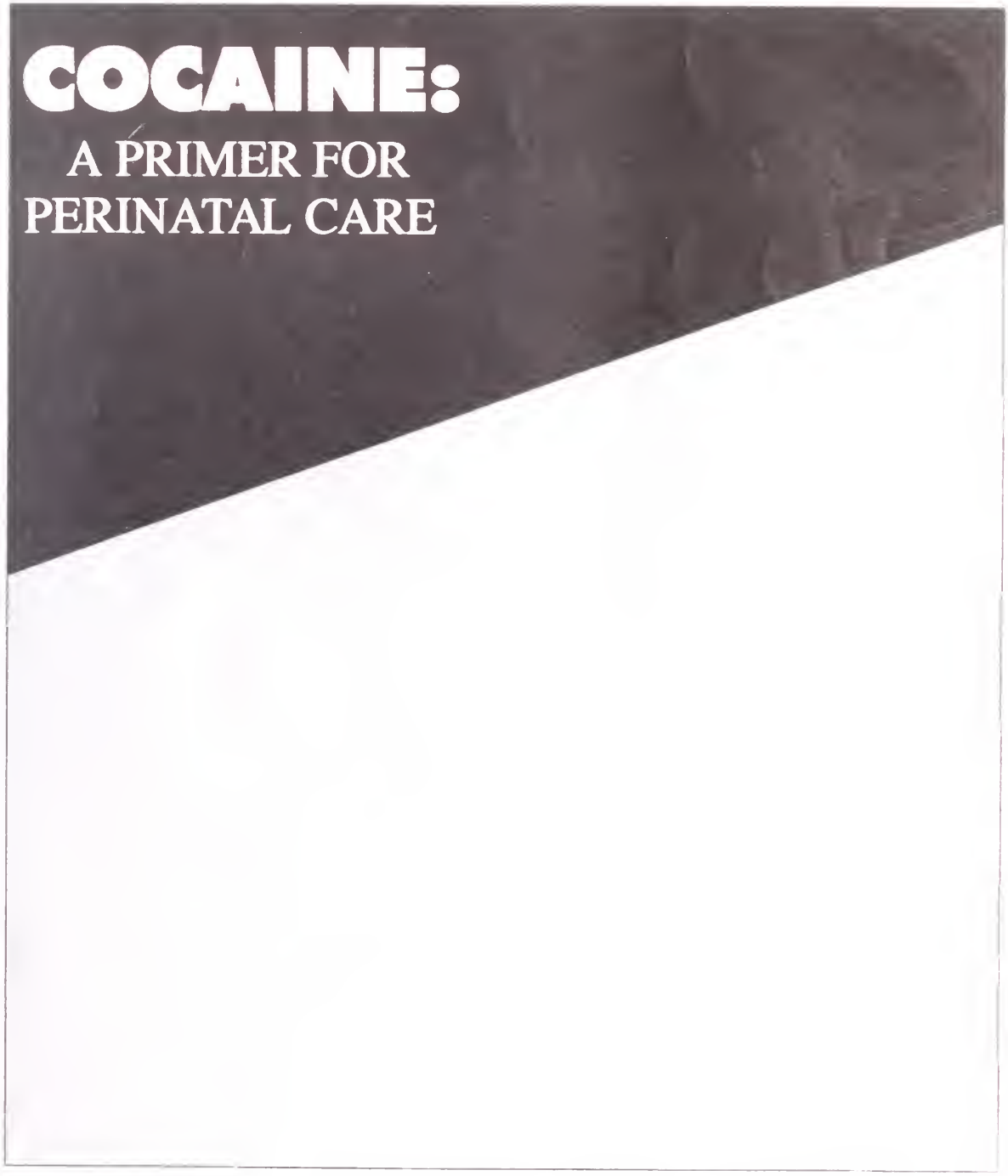
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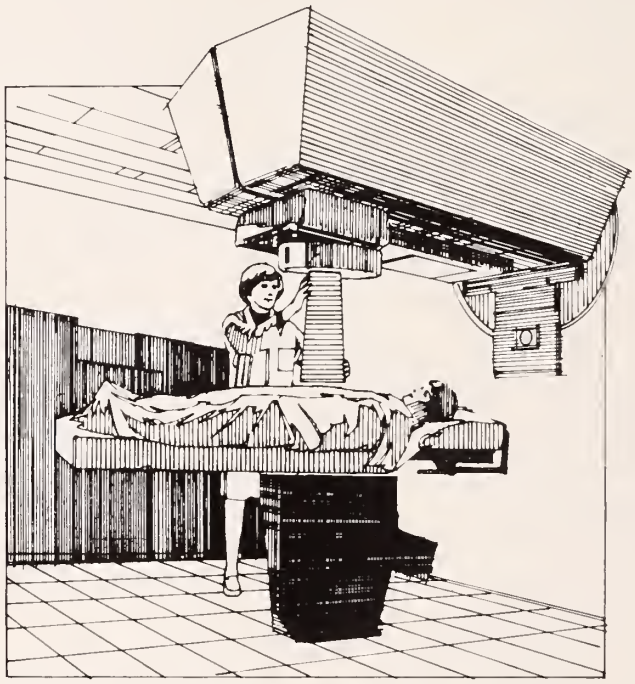
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AIR FORCE

NEWSLETTER

September 1990

Dear Doctor:

MSMA members have been part of a nationwide protest against proposed regulations to implement the Clinical Laboratory Improvement Act (CLIA) published May 21 with an August 20 deadline for comments. CLIA was passed by Congress in 1988 to counter media and public perceptions about inaccurate lab results. The AMA and other national medical organizations are leading efforts to change the proposed regulations because of their impact on access, cost and convenience to lab services. The Health Care Financing Administration has responsibility for drafting the regulation.

> Forty-six of Mississippi's 82 counties are listed as Primary Medical Care Health Manpower Shortage Areas in a recent survey. Effective January 1, 1991 all Health Manpower Shortage Areas will receive a 10% bonus for primary care services provided to Medicare recipients.

After Four years of discussion and numerous delays, it is now anticipated that the National Practitioners Data Bank, created by the Health Care Quality Improvement Act of 1986, will be operational on September 1, 1990. Unisys Corporation has been awarded a 5-year contract to operate the data bank by the U.S. Department of Health and Human Services. Reporting and querying requirements to the data bank have significant implications for physicians. An information booklet for physicians on the Practitioner Data Bank is available through AMA.

Sincerely,

Ginger Cocke

Ginger Cocke
Managing Editor

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References

1. USP DI Update, September/October 1988, p 120.
2. Br J Clin Pharmacol 1985;20:710-713.
3. Data on file, Lilly Research Laboratories.
4. Scand J Gastroenterol 1987;22(suppl 136):61-70.
5. Am J Gastroenterol 1989;84:769-774.

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2. *Maintenance therapy*—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than one year are not known.

Contraindication: Known hypersensitivity to the drug. Use with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix* may occur during therapy.

Drug Interactions—No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events was due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to three times the upper limit of normal, however, did not significantly differ from that in placebo patients. Hepatitis and jaundice have been reported. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Because cross-sensitivity among this class has been observed, H_2-receptor antagonists should not be administered to those with a history of hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

PV 2098 AMP [091289]

Additional information available to the profession on request.

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DATELINE

No Radioactivity Leaving Tatum Salt Dome Test Site

Las Vegas, NV - Analysis of environmental samples taken last April from the Tatum Salt Dome Site in Lamar County, Mississippi, are complete. Test results show no evidence that radioactivity from the two nuclear experiments conducted there in the 1960s has entered the food chain or drinking water supplies of area residence.

Breast and Cervical Cancer Mortality Prevention Act

Washington, DC - H.R. 4790 would create a new grant program to assist States in carrying out activities to detect and control breast and cervical cancer. The enrolled bill would authorize $50 million in FY 1991 and "such sums as may be necessary" in FY 1992-3 for these grants. The President's FY 1991 Budget contained $4.9 million for these activities.

Weight Reduction Effects Blood Pressure in Obese

Chicago, IL - More evidence is in regarding the benefits of weight loss in overweight men and women. A study in the August's Archives of Internal Medicine of 301 obese white men and women found that the patients lost the most amount of weight and had the greatest decline in blood pressure during the first half of their diet regimes.

FDA OKs Drug for Preemies

Washington, DC - The FDA approved a drug to treat respiratory distress syndrome (RDS) in premature infants. The drug, Exosurf Neonatal, is a synthetic form of surfactant, a naturally occurring substance that coats the lungs and keeps them from collapsing when exhaling. Approximately one-fifth of the 250,000 infants born prematurely each year have RDS.

Smoking Increases Stroke Risk In Young Adults

Chicago, IL - Young adults run a higher risk of suffering a cerebral infarction, or stroke, if they smoke, concludes a study in the June Archives of Neurology. Young adult smokers are nearly one and a half (1.43) times more likely to have a stroke than their counterparts who don't smoke. Researchers studied patients between the ages of 15 and 45.



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ORIGINAL PAPERS

Cocaine: A Primer for Providers of Perinatal Care

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COCAINE HAS BECOME a major health problem in the United States. Its particularly worrisome impact on the unborn child has created considerable concern among providers of perinatal care, parents of affected children, providers of rehabilitative medicine, and various other sectors of society which feel the indirect effects of this modern-day scourge. Suspicion of present or past cocaine use and/or abuse by a mother is now commonly raised in any pregnant patient admitted to UMC with abnormal uterine bleeding, preterm labor, trauma of any type, fetal growth retardation, fetal distress, or abnormal neonatal behavior or findings. The potentially serious permanent damage wrought, even by casual use of cocaine or one of its free-base derivatives during gestation, has raised a specter of serious proportion in perinatal medicine. In recent months there have been so many inquiries about this issue directed to us at the University of Mississippi Medical Center's Department of Obstetrics and Gynecology that we felt the need to share a core of current information with the state's providers of perinatal care. The following is a distillation of critical information about this subject which we hope will be useful to all.

From the Department of Obstetrics and Gynecology (Drs. Holland and Martin) and the Department of Newborn Medicine (Dr. Graves), University of Mississippi Medical Center, Jackson, Mississippi.

What is it Chemically?

Cocaine (benzoylmethylecgonine) is a naturally-occurring alkaloid obtained from the leaves of *Erythroxylon coca* and other species of Erythroxylon, coca shrubs and trees that are indigenous to Peru and Bolivia.[1] For centuries, the leaves of these trees have been harvested two or three times a year and used by the natives to increase their endurance by central stimulation. From the coca plant, cocaine is made in two steps to form cocaine hydrochloride and then it is released into its free-base form by several possible methods. Coca paste is the first product of extraction and contains approximately 80% cocaine. The hydrochloride salt is diluted with an adulterant, such as sugar or talc, and then sold for nasal or intravenous use. Thus, a wide range of purity from 20-80% contributes to variable response.

Cocaine was initially extracted in Germany by Albert Neimann in 1869. In addition to Sigmund Freud, well-known users include Sherlock Holmes, President Ulysses S. Grant, and Richard Pryor. Interestingly, cocaine is a byproduct in the production of Coca-Cola. As of 1985, an estimated 30 million Americans had used cocaine and 5 million are believed to be using it regularly.

How Rapidly Does Cocaine Produce a Desired Effect?

If snorted nasally, cocaine has a peak effect at approximately 30 minutes and a let down between 45-60 minutes. A faster peak effect of five minutes is obtained via either the intravenous or smoked route with a let down for both modes at 20-30 minutes.

What Physiologic Actions Does Cocaine Affect?

To help describe the action of cocaine, it is often compared by the scientist and user to amphetamine. Cocaine, like amphetamine, blocks nerve conduction by blocking the re-uptake of sympathomimetic neurotransmitters in nerve synapses (norepinephrine, serotonin, dopamine), thereby causing enhanced neuronal transmission. Thus, cocaine and amphetamine both effect marked increases in catecholamine re-uptake and moderate increases in dopamine release. In contrast to amphetamine, however, cocaine has marked local anesthetic effects in contrast to much less anesthesia induced with amphetamine.

Cocaine stimulates the central nervous system in a caudal direction with the first recognizable action on the cerebral cortex. The cortical stimulation produces euphoria, restlessness, and excitement. A decreased sense of fatigue is accompanied by increased perceptual awareness and cognitive speed in the user. Motor activities are well coordinated initially, but as doses increase involvement of the lower central nervous system centers cause tremors and convulsive movements. Central stimulation is soon followed by depression. Seizure activity and heart failure are associated with toxic levels of cocaine use.[2] Eventually, the vital medullary centers are depressed and death results from respiratory failure. Sudden death from accidental overdose associated with recreational use of cocaine can be preceded by delirium and hyperpyrexia.[3] There is some evidence that mental powers are increased transiently. This was apparently used by the well known Sherlock Holmes. *Dr. Jekyl and Mr. Hyde* was written in three days on a cocaine run by Robert Louis Stevenson.

Since cocaine blocks nerve conduction by preventing the re-uptake of sympathomimetic neurotransmitters, the user's circulating norepinephrine levels are increased, producing a subsequent vasoconstriction and tachycardia. Cocaine-induced transient hypertension is consistent with the acute phase of cocaine use.[2] The administration of a large intravenous dose of cocaine may result in immediate death from cardiac failure due to a direct toxic action on the heart muscle. In comparison to other local anesthetics, cocaine produces vasoconstriction and mydriasis. Cocaine is absorbed from all sites of application including the mucous membranes. Local vasoconstriction limits the rate of absorption at the site of administration, but despite this fact, the rate of absorption may easily exceed the rate of detoxification and excretion. Taken orally, cocaine is hydrolyzed and rendered ineffective in small doses. Cocaine is detoxified by the liver although some may be excreted in the urine.

What Does Cocaine Look Like in the Adult?

Symptoms of a acute cocaine overdose are mainly central nervous system in origin and include the patient quickly becoming excited, restless, anxious, and confused. *Reflexes are enhanced. Headaches* are common. The pulse is rapid and respirations are irregular. The pupils are dilated and exophthalmos occurs. Nausea, vomiting, and abdominal pain are frequent. Delirium, Cheyne-Stokes respiration, convulsions, and unconsciousness occur terminally. Finally, death results from respiratory arrest. Acute poisoning by cocaine runs a very rapid course. Also, there is a form of acute cocaine intoxication that results in almost immediate death, the patient often collapsing and dying before the physician realizes what has occurred. This type of poisoning probably results from an extremely rapid absorption of a high concentration of cocaine that is directly toxic to the heart.[3] The specific treatment of acute cocaine poisoning is the intravenous administration of a short-acting barbiturate and cardiopulmonary resuscitation if needed. The intravenous route is necessary because symptoms progress with such great rapidity.

What About Contaminants?

Street cocaine usually contains one or more adulterants in variable and unknown quantities. Frequently used additives are quinine, phencyclidine, amphetamine, arsenic, procaine, lidocaine, mannitol, talc, and strychnine. These additives often add to the complexity and complications of the perinatal period.

What is "Crack" Cocaine?

Crack is cocaine that is sold in the form of small, creamy-colored chunks resembling rock salt. In 1987, crack, the most deadly form of cocaine, exploded onto the American drug scene. This low-priced form of free-base cocaine, sold in tiny "rocks" for $10-$20, has become very prevalent in both urban and rural drug scenes.Crack's relative

purity and its route of administration increase its potency to many times that of cocaine hydrochloride, the powder form of the drug. No one is quite sure how or why crack developed. Shortly after comedian Richard Pryor's well-publicized, ether-related free-base explosion, free-base users discovered that the cocaine base could be extracted by a safe process using simple baking powder. The name is derived from the crackling sound the rocks make as they burn in the user's water pipe.

How is Crack Different From Cocaine?

Crack is different from cocaine hydrochloride in only three ways:

1. It is smoked rather than sniffed. This leads to a reaction (a high) in less than 10 seconds, rather than one to two minutes. The crack high lasts from 5-15 minutes.
2. Because it is smoked, the effect is much stronger than that created by snorting.
3. Crack seems to be less expensive because it is sold in small quantities at a low price. A vial sometimes will contain 3-4 small rocks and costs from $10-$20. Cocaine powder usually costs between $60 and $100 per gram, a cost somewhat less than crack.[4]

How Often is Cocaine/Crack Used During Pregnancy?

A large study done in Boston in 1987 revealed that approximately 17% of the urban women studied were using cocaine with three out of four being detected by history alone.[4] Another recently reported study from Chicago had an 8% incidence of use in pregnancy.[5] Moreover, most studies have found a correlation between cocaine use and the use of other abuse drugs, such as heroin, methadone, methamphetamine, marijuana, tobacco, and alcohol.[6, 7]

What Effect Does Pregnancy Have on Drug Metabolism?

It is well known that maternal blood volume increases 40-50% early in pregnancy. Cardiac output and stroke volume also increase creating a greater cardiac work load. Peripheral vascular resistance decreases and a greater blood flow is delivered to the uterus to sustain the developing fetus. As in the nonpregnant patient, cocaine is detoxified by the liver and plasma cholinesterases. However, activity of this enzyme system is much reduced in the fetus, neonate, and pregnant women, resulting in *slower metabolism and elimination of the drug during pregnancy*. It has also been noted that in pregnancy the cardiovascular system exhibits a *greater sensitivity* to cocaine than observed in the non-pregnant state.[8]

What are the Immediate Intrauterine Effects of Cocaine?

Since cocaine has high water and lipid solubility, low molecular weight 340 (a molecular weight of less than 1,000 usually crosses the placenta), and low ionization at physiologic pH, it should freely cross to the fetus. The placental transfer of cocaine has not been quantified in humans, but in sheep looking at placental transfer of cocaine, the fetal serum level was 12% of the maternal level at five minutes. At 30 minutes, the fetal level was only 14% compared to maternal level, but this small increase was felt to be due to the 36% decrease in uterine blood flow. During pregnancy, uterine blood vessels supplying oxygen and nutrients to the developing fetus are maximally dilated, but they vasoconstrict readily in the presence of catecholamines and the vasoconstriction is dose related.[9] In sheep studies, the significant decrease in uteroplacental blood flow was associated with hypoxemia, hypertension, and tachycardia in the fetus.[10]

Is Spontaneous Abortion More Common With Cocaine Use?

Possibly. In a study by Zuckerman at Boston University, a statistically significant higher incidence of one or more spontaneous abortions was found in 117 users (30%) compared to 562 non-users (21%). But several other studies, examining cocaine consumption in current pregnancies, found no correlation between cocaine and spontaneous abortions.[5]

Does Cocaine Use Shorten Pregnancy?

Yes. A number of investigators have shown that gestation is shortened when cocaine use occurs. In a 1989 study by Chasnoff, the incidence of preterm delivery (defined as < 38 weeks) in the three groups was 17% (4 of 23; first-trimester use only), 31% (16 of 52; cocaine use throughout pregnancy), and 3% (1 of 40; drug-free controls). Only the difference between cocaine use throughout pregnancy and the drug-free group was significant ($p < 0.003$).[11]

Recall that preterm delivery accounts for only 6-7% of all deliveries. However, 75% of perinatal morbidity and mortality occurs in preterm infants. Additionally, high levels of circulating norepinephrine caused by cocaine use can result in an increase of uterine contractility which is also important in another prenatal complication.[12]

Do Pregnant Patients Who Use Cocaine Have a High Risk of Premature Rupture of Membranes?

Yes. Several studies have looked at cocaine's possible effect on premature rupture of membranes (PROM) and even though the differences were not significant, the patients using cocaine had a higher risk of PROM. In contrast, 33% of 50 "crack" users had PROM compared to 18% of non)drug)using controls ($p = 0.05$) in a study by Cherukuri at the State University of New York at Brooklyn.[13]

Is the Risk of Preeclampsia/Eclampsia Increased?

Probably not. In one study at St. Luke's Hospital at Columbia University, New York, the incidence of PIH in cocaine-exposed and non-exposed women was too low to report.[14] In another study at the University of Texas in Dallas, 25% (13 of 53) of cocaine-exposed women versus 4% (4 of 53) of non-exposed controls had PIH.[15] However, other factors such as age, race, and gravidity could probably explain the difference.

Does Cocaine Use Increase the Likelihood of Placental Abruption?

Yes. Two cases of abruptio placentae following cocaine use were reported in 1983, one using intravenous and one intranasal cocaine.[2] A number of studies have noted similar cases of this complication although some investigators either did not observe any cases or the number of cases in the studied patients was to low to report.[8]

Bingol, in 1987, demonstrated in his patient population that abruptio placentae-induced stillbirths in cocaine users, multiple drug users, and drug-free controls were 8%, 4.5%, and 0.8%, respectively. The difference between the cocaine-only group and the controls was significant.[16] While the exact mechanism of cocaine-induced placental abruption is undetermined, the general effects of the drug offer a reasonable explanation. Cocaine prevents norepinephrine re-uptake at nerve terminals, produces peripheral and placental vasoconstriction, reflex tachycardia with acute short-term hypertension, and uterine contractions. The net effect of these actions in some cases may be abruptio placentae. Pregnant women with hypertensive disorders are at increased risk for abruptio placentae. No investigation has shown a statistically significant increase in placenta previa among cocaine users.

Does Cocaine Use Impair Fetal Growth?

Yes. A majority of studies published to date found, after correcting for confound variables, that cocaine exposure, when compared to non-drug abuse populations, was associated with reduced fetal growth. This reduction was comparable, in most cases, to that observed in fetuses exposed to opiates, such as heroin or methadone. In Chasnoff's first study in 1985, no significant differences were observed in fetal growth parameters between groups of women consuming cocaine, cocaine plus methadone, methadone, and drug-free controls.[12] However, in a subsequent publication by Chasnoff in 1989, women who used cocaine throughout gestation (as opposed to those who only used it during the first trimester) were significantly more likely than drug-free controls to deliver low birth weight infants; 25% versus 5%.[11]

In a prospective study by Zuckerman from Boston University in 1989, 1,226 mothers, 18% used cocaine as determined by interview or urine assay. Infants of women with positive urine assay for cocaine, compared to infants of non-users, had lower birth weights by 93 grams, shorter lengths by 0.7 cm, and smaller head circumferences by 0.43 cm, all of which were significant.[6]

Is Fetal Distress Before and During Labor More Likely in Cocaine/Crack Users?

Yes. Two studies have reported a significant increase in perinatal distress in cocaine abusers over women using heroin/methadone[17,18] and drug-free controls.[19] A significant number of meconium-stained infants were noted in studies comparing cocaine users to methadone-maintained women (25%) versus 8.2%)[17] and to non-cocaine/other drug-exposed subjects (25% versus 4%).[15]

Can Maternal Cocaine Use Seriously Damage a Fetus Prior to Labor?

Yes. Eight reports have described perinatal or newborn cerebrovascular accidents and resulting brain damage in infants exposed in utero to cocaine. Follow-up during the neonatal period indicated mild to moderate neurodevelopmental abnormalities.[17] Brain lesions were described in 39% (11 of 28) of infants with positive urine assay for cocaine and 33% (5 of 15) of newborns with a positive assay for methamphetamine immediately following birth. The brain injuries (not differentiated by drug type) were hemorrhagic infarction in the deep brain (6), hemorrhage around the internal capsule/basal ganglion (3), cystic lesions in the deep brain (4), large

posterior fossa hemorrhage (3), absent septum pellucidum with atrophy (1), diffuse brain atrophy (1), and generalized brain edema (1). In a control group of 20 term infants with severe perinatal asphyxia, only one had a similar brain lesion.[20]

In 1986, Chasnoff reported a case of perinatal cerebral infarction in a full-term infant associated with maternal cocaine abuse. The mother of the infant used a large amount of cocaine (6 grams) intranasally during the 72 hours preceding the birth, with her last dose reportedly taken 15 hours before delivering the infant. Apgar scores were 1 and 7. After resuscitation, the infant had tachycardia followed several hours later by frequent episodes of apnea, cyanosis, hypertension, and multiple focal seizures. At 24 hours of age, the infant was diagnosed as having an acute cerebral infarction. This case is suggestive of susceptibility of the neonate to the same cocaine-induced acute transient hypertension documented in adult cocaine use.[21]

Is First-Trimester Maternal Cocaine/Crack Use Likely to Cause Congenital Anomalies?

Possibly. One study reported 11 infants exposed to cocaine in utero who were noted to have major central nervous system anomalies, and 10 of the infants also had craniofacial defects such as hydranencephaly, porencephaly, hypoplastic corpus callosum, and encephalomalacia. Other congenital malformations have been noted such as prune belly syndrome, hypospadias, female pseudohermaphroditism, hydronephrosis.[22] The rates of major congenital malformations in Bingol's New York study involving 50 cocaine-only users, 110 cocaine plus poly-drug users, and 340 drug-free controls were 10%, 4.5%, and 2%, respectively.[16] The groups were classified by history and infant urine assays and chronic alcohol abusers were excluded. The difference between the first and last groups was significant. The incidence of minor abnormalities was similar among the groups.[8]

Studies conducted on mice have shown evidence of cocaine-induced fetal defects. However, no evidence of teratogenicity has been reported in other animals research. It is reasonable to assume that the potential for human fetal defects remains high because street cocaine frequently contains undetermined adulterants in unknown quantities.[3]

In 1985, Chasnoff reported the single case of a cocaine-exposed neonate born with prune-belly syndrome, major malformations of the genitourinary tract, bilateral hydronephrosis, and bilateral cryptorchidism. The mother of this neonate reported a single instance of cocaine abuse (4-5 gram) at week 5 of her pregnancy. At this time in human fetal development, the urogenital system is undergoing organogenesis. She denied any further cocaine abuse until the third trimester.[12] Another investigator reported no evidence of teratogenicity in the infants of eight mothers who gave a positive history of cocaine abuse during pregnancy.[23] It is clear that the effects of cocaine as a human teratogen must be studied more extensively before any conclusions can be derived.[3]

Are There Delayed Effects of Maternal Cocaine Use, Particularly Regarding the Child's Neurobehavior?

Immediately, yes. Delayed, possibly. Newborn infants with in utero exposure to cocaine may have significant neurobehavior impairment during the neonatal period. Immediately postpartum, cocaine-positive neonates have been noted to have tremors, hypertonia, poor feeding, tachypnea, and abnormal sleep patterns which have been observed by a number of researchers. The onset of these symptoms usually occurs 1-2 days after birth with peak severity of sympoms occurring on days 2 and 3.[13,19] Seizures, which may have been related to withdrawal, have been observed.[15,24] In general, the problem of withdrawal is not a significant problem, especially when compared to infants exposed to heroin or methadone. Management of withdrawal in a cocaine-exposed infant is close monitoring. Any kind of drug therapy usually prolongs the period of withdrawal.

In a blinded study by Chasnoff in 1987 which compared infants of methadone-maintained women to those of cocaine-exposed women, the latter group had a significantly increased degree of irritability, tremulousness, and state lability.[17] They were also noted to have significant depression of interactive behavior and poor organizational response to environmental stimuli. This study was expanded to include drug-free controls.[11,12] Sixteen term newborn infants with cocaine-positive urine all demonstrated none to very poor visual attention and tracking, abnormal state regulation, and mild to moderate hypertonicity with decreased spontaneous movement.[25] Another group of investigators reviewed the EEGs of 38 exposed neonates with a finding of 17 abnormal EEGs during days 1-7 and nine abnormal on days 8-19. All normalized between 3 and 12 months. With normalization of all the infants' EEGs, no treatment or follow-up was recommended.[26]

Can Cocaine Intake by the Mother Lead to Later Sudden Infant Death Syndrome (SIDS)?

Yes. Several studies have looked at the relationship between cocaine and SIDS with mixed results with no clear evidence surfacing. There is a 5-10 times increased risk of SIDS of infants born to opiate-abusing mothers.[3] In 1987, Chasnoff noted an increased rate of SIDS (15%) in cocaine users compared to 4% of the methadone users.[18] In 1989, Chasnoff performed a prospective study looking at 32 cocaine-exposed and 18 methadone-exposed patients. Five cocaine-exposed but no opiate-exposed infants had apnea of infancy, and all five of these infants had an abnormal cardiorespiratory pattern.[27] In Bauchner and Zuckerman's prospective study, 175 of 996 women who were consecutively enrolled for prenatal care used cocaine sometime during pregnancy. Only one infant of the mothers who used cocaine died of SIDS, a risk of 5.6 in 1,000, compared with four infants among the 821 non-exposed infants, a risk of 4.9 in 1,000. Thus, there was no significant difference.[28] A greater number of cocaine-exposed infants will have to be followed before a SIDS risk factor can be ascertained.[12]

Can Maternal Cocaine Use Cause Maternal Mortality?

Yes. Fatalities following adult cocaine use have been reported frequently, but only one case of mortality in a pregnant woman has been reported. A 24-year-old woman, who smoked "crack" daily presented at 34 weeks' gestation with acute onset of severe headache and photophobia. Her symptoms were determined to be due to subarachnoid hemorrhage resulting from a ruptured aneurysm. Following surgery to relieve intracranial pressure and an unsuccessful attempt to isolate the aneurysm, the patient gave birth to a normal 2400 gm male infant. Her condition subsequently worsened on postpartum day 21 and she expired four days later from recurrent intracranial hemorrhage.[29]

Can These Patients Breast Feed?

No (if they continue to use the drug). In 1987, Chasnoff looked at cocaine intoxication during breast feeding and reported the case of a 2-week-old infant who was born to a cocaine user and who was breast feeding exclusively. In this baby, irritability, vomiting, and diarrhea developed within three hours of breast feeding. It took 60 hours for the cocaine metabolites to clear from the infant's urine. Heroin and methadone do not appear in breast milk.[30]

How is Cocaine Use Detected?

In the UMC toxicology laboratory, a cocaine screen costs approximately $15 and a complete drug screen costs $150. Cocaine can be detected in the urine up to six hours after its use. Cocaine metabolites can be detected in adult urine up to 48 hours after cocaine use and as long as 120 hours after birth in neonates. During the month of October 1989, approximately 100 toxicology screens were obtained primarily from mothers (at risk for drug use; selection was not random) and newborn babies at UMC and 15% were positive for cocaine.

Should Pregnancy Care be Modified for Mothers Suspected or Shown to be Cocaine Users?

MacGregor recommends good prenatal care with the addition of a urine toxicology screen each trimester, HIV each trimester, and very close monitoring with ultrasound.[31] Even superlative prenatal care cannot avert the unknown risks of congenital anomalies, neurobehavioral abnormality, preterm delivery, intrauterine growth retardation, placental abruption, lower gestational age at delivery, and lower infant birth weight.[32] Probably the biggest improvement in these high-risk patients with good prenatal care is the improvement in nutritional status, better social service and financial support, intensive antenatal surveillance, and better-planned intensive neonatal care.[23]

In summary, much of the perinatal morbidity and mortality is felt to be associated with cocaine's vasoconstrictive properties causing fetal and uteroplacental blood flow abnormalities, and cocaine's ability to stimulate uterine contractions. Many prenatal complications are associated with cocaine abuse. Recall that concurrent drug abuse, hepatitis, and HIV positive is common among cocaine-positive women, possibly contributing to adverse outcome.

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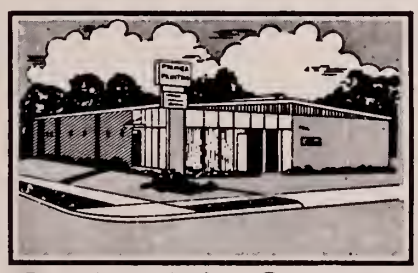
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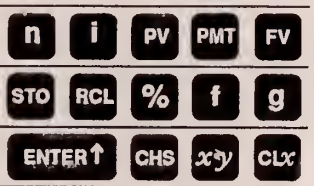
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Radiation Therapy a Good Alternative for Unoperable NSCLC

JOSEPH SALLOUM, M.D.
Hattiesburg, Mississippi

THE INCIDENCE OF LUNG CANCER in the United States is in excess of 150,000 cases per year. This disease has long been the leading cause of cancer death in men, and has recently (since 1986) surpassed breast cancer as the leading cause of cancer death in women. Its incidence is increasing faster than that of any other malignancy.[1]

Surgery is the only modality with a significant potential for cure. However, it is applicable to only a minority of patients. About 20% of all patients presenting with lung cancer are suitable for curative surgery.

The remaining patients are referred to radiation therapy for control of loco-regional disease and chemotherapy for control of systemic disease. Although great gains in longevity have not materialized, a very real benefit in the quality of life for most patients with cancer of the lung can be achieved by the judicious application of radiation therapy and, for a few, cure will result. This paper reviews the results of external radiation therapy in patients with NSCLC who had disease limited to the chest treated at the Carl R. Hale Radiation Center in Hattiesburg, MS from 1982 to 1986.

Methods and Materials

A total of one hundred thirty-three patients with unoperable NSCLC were accepted for radiation therapy from 1982-1986. These patients had disease limited to the chest clinically. No patients were excluded from the study. Patients that did not complete the planned radiation therapy course or who died during treatment were included in the study. One patient had Stage I, sixty-one had Stage II, and seventy-one had Stage III.

The Stage II patients were technically operable but for medical or other reasons thoracotomy could not be performed and were referred to radiation therapy.

The characteristics of the patients are shown in table I. A chest CT was not obtained in all cases making the evaluation of the status of the mediastinal nodes suboptimal and most probably understaging some of the Stage II patients.

TABLE I: PATIENT CHARACTERISTICS

Average Age (yrs.)	69	
Sex		
Male	101	
Female	31	
Stage		
I	1	
II	60	
III	71	
Histology		
Squamous	74	(56%)
Adeno Ca	22	(17%)
Large Cell	20	(15%)
Unknown or Undifferentiated	16	(12%)
Minimum Follow - up (mos.)	36	

Also bone scan and brain CT were not obtained routinely as part of the staging if the patient did not have symptoms suggestive of metastatic disease. All patients were treated with a Cobalt 60 unit and received a dose in the range of 1500-6600 cGy (rad). Seventy-one percent of them received doses equal to or above 5000 cGy. About 25% of patients were treated by a split course fashion with a period of rest given in the middle of the treatment course.

Results

The overall five year survival of the whole group was 13 percent. When analyzed by stage, patients with Stage II did much better than patients with Stage III disease. The five year survival for Stage

From the Carl R. Hale Radiation Center, The Forrest General Hospital Hattiesburg, Mississippi

II and III was twenty-two percent and four percent respectively. The median survival for Stage II and Stage III was eighteen months and eight months respectively. Fifty percent of the patients died during the first year and about 75 percent by two years. The one and two year survival for the whole group was 48 percent and 22 percent respectively. The survival curves flattened by the end of the third year (see Figure I).

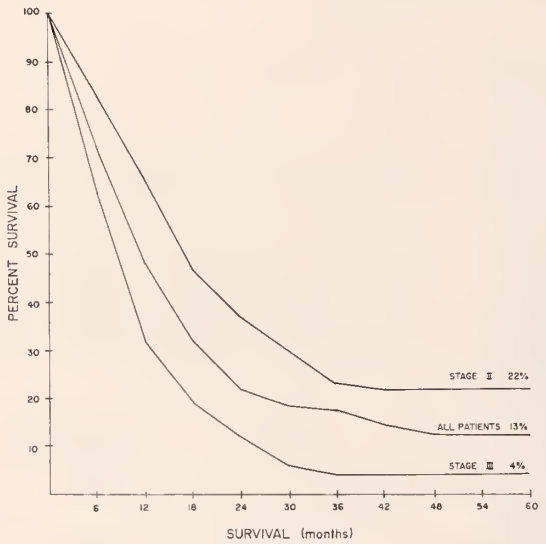


FIGURE I: SURVIVAL BY STAGE

When survival was studied according to the doses of radiation delivered, a significant improvement of the five year survival was associated with doses GE 6000 centigray (see Figure II). Split course irradiation didn't show any superiority over continuous regimen.

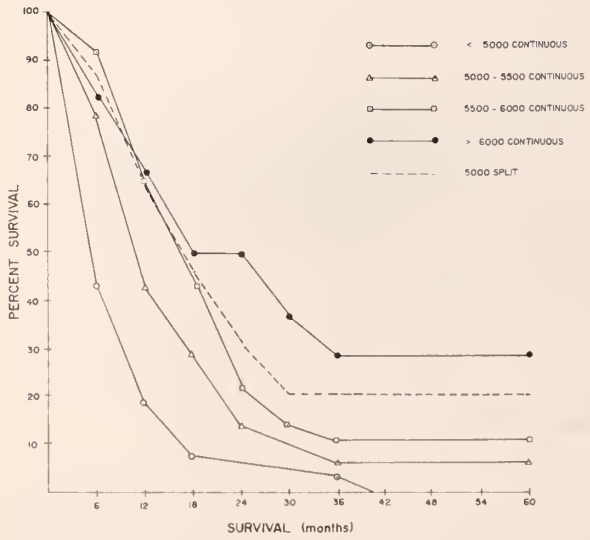


FIGURE II: SURVIVAL ACCORDING TO RADIATION DOSES

Twenty-five percent of the patients developed distant metastases. The most common site was the brain 50%, followed by bone 34%, then liver, adrenals and contralateral lung.

Discussion

Surgery is applicable to only a minority of patients with lung cancer because they either had distant metastasis at the time of diagnosis or extensive intrathoracic disease that precludes curative surgery. Also, in addition to stage, the physiologic reserve of the patient, often suffering from chronic lung disease because of a long history of smoking and cardiac disease, contraindicated pulmonary resection in many cases with technically operable tumors. In our series there were 62 patients with technically operable lung cancers that were deemed unoperable because of poor pulmonary reserve and other medical conditions. They were, however, suitable for curative radiation therapy and had a 22 percent five year survival.

Stage III patients harboured a much larger amount of disease in their chest that was difficult to irradiate especially with a marginal dose of radiation. The control of the local disease in the chest continues to represent a major problem in NSCLC with a significant proportion of patients dying of persistent intrathoracic tumor.[2] Only 25 percent of patients in our series developed distant metastasis. From basic principles advanced by Fletcher,[3] it is obvious that high doses of radiation would be required to sterilize tumors the size of those frequently treated in bronchogenic carcinoma. Our survival curves according to radiation doses indicate an improved survival with doses GE 6000 cGy. (60 Gray).

A prospective randomized RTOG trial of hyperfractionated radiation therapy for unresectable NSCLC conducted from 1983 through 1987,[4] compared total doses of 60.0, 64.8 and 69.6 Gray using 120 cGy Bid with GE 4 hr interval. Survival was compared among the three arms and with standard fractionation (200 cGy gd, 30 fractions, 60 Gray total dose) from previous RTOG studies. Survival appeared to be significantly better for hyperfractionation (9.8 month median survival, 43 percent one year, 20 percent two years) than standard fractionation (8.0 median, 32 percent one year, 13 percent two years). The best results were found in patients who received 69.6 Gray (median 13.9 months, 58 percent one year, 33 percent two years).

Summary

This retrospective analysis of 133 patients with unoperable NSCLC suggests that radiation therapy

administered to GE 6000 cGy level can result in significant long term survival in patients with technically resectable but medically unoperable disease.

Conclusion

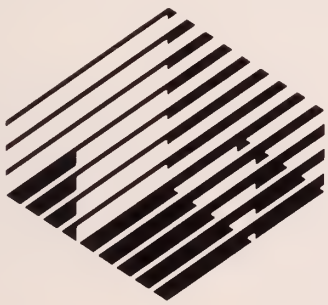
This report suggests that radiation therapy is a good alternative for patients with early stage lung cancer which is technically operable but for medical or other reasons thoracotomy cannot be performed.

High doses of radiation are required to achieve a better local control in the chest that is usually associated with a higher survival rate. Hyperfractionation is advocated for the delivery of higher doses of irradiation to the tumor without enhancing morbidity in the normal tissue. ★★★

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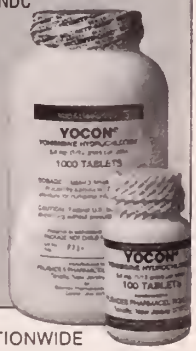
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

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SPECIAL ARTICLE

Volunteering Physicians: Robert Smith, M.D., Milam S. Cotten, M.D., Max L. Pharr, M.D. and James C. Waites, M.D.

The Annual Physicians Award for Community Service, sponsored by the Mississippi State Medical Association began in 1962. Recipients are members of the association actively engaged in the practice of medicine. The purpose of this award is to provide recognition for the many and varied services above and beyond the call of duty which these physicians render to their respective communities.

Each recipient of the award is nominated by his or her component society and selection is made by a committee of the association. This award presented each year during the Annual Session of the MSMA House of Delegates provides the opportunity for the association to openly reward one deserving individual. After reading the information submitted on candidates, your association officers realized that we were not taking full advantage of the opportunity to recognize many others for their community service.

From time to time in upcoming issues of JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION there will be articles about "Volunteering Physicians." The first of these articles begins with our 1990 MSMA Community Service award winner Dr. Robert Smith of Jackson and several other physicians.

Robert Smith, M.D.

The 1990 MSMA Community Service award was presented on May 31, to Robert Smith, M.D., of Jackson who was nominated by Central Medical Society. Dr. Smith is director of Mississippi Family Health Center and is chief of staff at Hinds General Hospital. Practicing medicine in Mississippi since 1962, he has made the quality of life better for many Mississippians through his involvement in the community and professionally. After receiving his M.D. degree from Howard University, Washington, D.C. and serving his internship at Cook County Hospital in Chicago, IL, Dr. Smith came back to Mississippi to find that he could not do what he was trained to do. Dr. Smith found his original efforts to practice medicine in the Delta stymied by patients with major diet problems, no money to get prescriptions filled, plus environmental and housing problems. Questioning what good it did to write a prescription and give people advice then send them back to the same environment, Dr. Smith's primary focus became one of finding ways to resolve these problems. During the mid-sixties, he was a leader in obtaining equal privileges for black patients and doctors. Dr. Smith along with Dr. H. Jack Geiger of Harvard and Count Gibson, Jr. of Tufts helped develop concepts which led to the establishment of federally funded neighborhood health centers. The first of these centers was opened in Mound Bayou, Mississippi. These centers brought doctors and health care to previously unserved areas of Mississippi and the nation. Not only did Dr. Smith help to get these centers started but he has also volunteered his time and services for their continued operation. There are now over 20 such centers providing health care to low income Mississippians and over 500 such centers nationwide.

Dr. Smith helped develop a cooperative education program with Tufts University in Boston, Massachusetts to accept selected minority students from Mississippi. More than two dozen students have graduated in health professions so far. He helped to establish a program with Brown University in Providence, Rhode Island, that allows Tougaloo students to participate in the university's curriculum and complete a clinical rotation at the Mississippi Family Health Center in Jackson, which Dr. Smith opened in 1970. He has made a difference in many ways giving his time and talent to many organizations developed to help people. Dr. Smith was in-

volved with the first large, community-based Head Start program when it was an unacceptable federal instrusion in this state. He volunteered his services as the first medical director of this program supervising local and out-of-state health professionals.

Dr. Smith is and has always been involved in health promotional activities. He has volunteered for more than seventeen years with the Jackson Public School System at senior and junior high school levels conducting health programs and physical exams for athletic programs. He has served as team physician for athletic events and has served as a team physician for the International Ballet Competition held in Jackson.

Dr. Smith is a twenty-year volunteer with the Mississippi Chapter of the American Red Cross and a charter Board Member of the Hinds County Human Resource Agency, City Spirit-Arts Alliance of Jackson/Hinds County. He also serves as a board member of Leadership Jackson of the Jackson Chamber of Commerce, the Jackson Urban League, the Jackson Metropolitan YMCA, the Jackson United Way, and was Commissioner of the MS Health Care Commission and the Governor's Commission of Emergency Medical Services.

Dr. Smith has been cited many times both locally and nationally for his work, including a Public Convocation held in his honor at Jackson State University in October of 1989. He is also one of the first recipients of the Solomon Carter Fuller Award presented by Black Psychiatrist of the American Psychiatric Association for forthright furtherance of mental health of black people and an Honorary Doctorate of Humane Letters from Tougaloo College.

Milam S. Cotten, M.D.

Another of our volunteering physicians is Dr. Milam S. Cotten, an ophthalmologist in Hattiesburg. In February of this year, Dr. Cotten participated in a Rotary Eye Surgical Mission to Nigeria, Africa representing The Rotary Club of Hattiesburg, District 684.

As one of ten Rotary volunteers on the team, Dr. Cotten donated his ophthalmological skills in Jos in the State of Plateau, Nigeria. The goal of the mission was to perform cataract operations on people blind with bilateral mature cataracts. Dr. Cotten and the team of Rotary volunteers performed 125 cataract operations and screened other patients for eye diseases during the two week visit to Nigeria. They carried with them microscopes, instrument sets, pharmaceuticals, and all other supplies necessary for the undertaking, leaving any excess supplies behind to help in the needs of the local Nigerians.

Dr. George Obikili was the native Nigerian ophthalmologist who helped coordinate the plan and acted as the medical host during the two week trip. The Military Governor of the State of Plateau conducted an opening ceremony endorsing the plan, and observed the first operation in surgical attire in the operating room. During the eye mission, several of the local ophthalmologists, residents and other medical personnel from the surrounding areas participated and/or observed the various surgical procedures.

At the end of the mission, the Military Governor hosted a banquet attended by 300 guests in appreciation of the Mission, to which the Rotary volunteers had performed their services free of charge.

Max L. Pharr, M.D.

During his thirty-six years as a family physician in Jackson, Dr. Max Pharr has made a practice of lending a hand to charities. For thirty-five of the thirty-six years of his practice, he has treated patients at the Methodist Children's Home and also provided care for Friends of Alcoholics. For a number of years he did the same for the Mississippi School for the Blind. All of these services have been provided at no charge. "This is something I have always enjoyed doing," Dr. Pharr said. "I just feel like you need to do something to account for your being here other than just trying to make a living."

In 1986 Dr. Pharr received the Oak Forest Exchange Club "Book of Golden Deeds Award" which is given annually to someone who had donated time and services to charity organizations. In 1986 he also received the Family Doctor of the Year Award of Mississippi given by the Mississippi Academy of Family Physicians to the family doctor who is an active member of the MAFP and has performed exceptional service to his community and to medicine in Mississippi. In 1989, Mississippi College in Clinton, MS, presented Dr. Pharr the "Order of the Golden Arrow." This award is reserved for alumni and friends of the College who have excelled in their chosen professions and display a continued loyalty to Mississippi College through their personal involvement.

Dr. Pharr also has the distinct honor of having delivered the first set of quadruplets born in Mississippi in 1963.

James C. Waites, M.D.

Dr. Waites began his practice of family medicine in Laurel, MS about thirty years ago. He has been actively involved since that time in the work of

many community and civic organizations. For his unselfish efforts, Dr. Waites was named Laurel's Outstanding Young Man in 1964 and was awarded the Sertoma Club's Service to Mankind Award in 1985.

Dr. Waites has a great rapport with all ages, but is particularly fond of young people and evidences an intense interest in all their activities. For over twenty years, he has voluntarily served as team physician for the Laurel High School Tornadoes, attending both home and away games. Local schools have called on him on numerous occasions for consultations, speaking engagements, and drug awareness programs. Without reservation, Dr. Waites has always been available. Dr. Waites also remains loyal to his own alma mater, having served as president of the University of Southern Mississippi Jones County Alumni Association, president of the International Alumni Association, and president of the University of Southern Mississippi Foundation. As a token of respect for his numerous contributions to the University, Dr. Waites was named to the prestigious University of Southern Mississippi Alumni Hall of Fame. Dr. Waites was president of his medical school class at the University of Mississippi Medical Center and has served as president of the University of Mississippi Medical Alumni Association and president of the Guardian Society.

Each of these volunteering physicians has unselfishly given of his time and talents to improve the quality of life in the communities where they live.

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THE PRESIDENT'S PAGE

J. ELMER NIX, M.D.

Unbundling

"Unbundling." It is not listed in my dictionary, but we all know precisely what it means. Or do we?

The prefix *un* is a term used to express the reversal of the action of a verb, or to form a verb from a noun. Bundle refers to the number of things or quantity of anything bound together. These are my dictionary definitions.

Today, some surgeons increase their fees by submitting individual charges for a number of discreet procedures performed at the same time — for the same condition. This represents "unbundling."

Let us discuss a particular example, the carpal tunnel syndrome. This surgical procedure consists of making an incision through the skin and subcutaneous tissue, then sectioning the transverse carpal ligament, and making certain that pressure on the median nerve is relieved. Occasionally, it is necessary to do a tenosynovectomy or release some adhesions about the nerve — but these procedures are rare and vary as to their extent. Appropriate coding of this procedure would be CPT number 64721, neurolysis and/or transposition; median nerve at carpal tunnel. However, there are those who code this (and charge for each procedure) as CPT number 64721 plus tenosynovectomy, extensive, median neurolysis, plastic closure of wound, Z-plasty of transverse carpal ligament, sectioning of transverse carpal ligament, etc. There is certainly nothing wrong with listing all of these procedures that are performed in the operative report, but we intuitively know which procedure should be charged and which ones do not warrant a charge. There are those who list every little insignificant procedure and charge for each one as if it had been done as a single operative procedure. That my dear colleagues is unfair, contemptible and probably fraudulent in many cases. That particular practice is causing the federal government and other third party payors to look at physicians in a different light — as greedy, dishonest, money grubbers. Some physicians have taken this action because the third party payors are not paying what the physician feels is a fair fee. However, that third party payor has his contract with the patient and not with the physician. We must not over react to

(Continued on page 306)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
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VOLUME XXXI, NUMBER 9
SEPTEMBER 1990

Government Limits Access to Care

Under the guise of improving the quality of care as well as reducing fraud and medicare expenditures, the government is soon to institute in-office laboratory control. When I wrote an editorial in this journal several months ago on quality control in our office laboratories, I felt that we could effectively do our *own* quality controls. Needless to say, the Do-Gooders have done it again. Not believing that we can be trusted to do our own quality control, they, in their infinite bureaucratic wisdom, have decided to do it for us, or have it done their way, as the case may be.

They have elected three levels of control as you are aware of now from the deluge of materials that have come out about it so far. The physician laboratories who are to be "waivered" will not be able to do much more than the patients themselves can do with over-the-counter do-it-yourself testing kits.

The Level I tests proposed by HCFA are what most of us in solo or small group practices do in our offices. With the proposed $500.00 fee plus the cost for all their required testing materials, the cost for the quality control in most offices will be prohibitive. In other words, our laboratories are not much more than breaking even, financially, now — thanks to the government requiring us to accept their low payments for the tests. Now with the additional costs of their programs, it can only cut down on the service that we can provide our patients as many of us do not do sufficient numbers of tests to continue under the proposed government regulations.

What all this means is that many of our poor and elderly patients that already have trouble getting into town to see us will have to find a way to get their tests done in another town several miles further away. Many will have to do without tests, some of which can mean the difference between life and death in the regulation of some diseases. I believe that this constitutes infringement by the government on our patients' access to proper medical care.

Just as physicians and patients banded together and reversed the catastrophic health insurance legislation last year, we must work equally hard to reverse this preposterous imposition on our patients and ourselves.

Thank God I'm a physician.

Joe Johnston, M.D.
Associate Editor

COMMENT

The Future Generation

The study and practice of medicine is and has been a noble profession. For centuries it has offered, and is now filled with opportunities, for those who hunger for a life of service, usefulness, self-satisfaction and who have compassion for others.

In recent years, there has been a growing concern among our leaders in the profession regarding the future of medicine. Government interference, malpractice problems, the irresponsible insurance industry, and the many abuses of the health care programs by the public, the provider and the bureaucrats, contrary to the Legislative edict and intent, have reached the point that the study of medicine is no longer attractive to our young, talented and dedicated students.

The declining number of applicants to our medical schools, as evidenced by the medical schools advertising for students, is a formidable warning to the medical profession and strikes at the very heart of the future of medicine and quality health care.

The stress and concerns are understandable for those who have been privileged to have practiced

medicine during the "Golden Years," when the dedicated physician occupied the pedestal of respect in his community and a position of authority in health services. The new innovative and sophisticated clinical tests, reflecting the marked advances in medical care and demanded by the public, must be calculated in the spiraling cost of health care. Inflation, the rapidly elevated malpractice insurance premiums, the advancing age of "Graying America" with all their maladies and the lure of the greenback for a few less dedicated doctors were not considered in estimates of cost of 1965.

It is agreed that the intent of Medicare is apropos and commendable, but difficult to control. However, there is no such thing as a free lunch. The standards of quality medical care dictate the use of these many new innovative tests and equipment as they become available to the physician, and they carry expensive prices beyond the control of the doctor. The Medicare program as of today is increasingly schizophrenic about cost control versus quality care. The present status of government medicine is not compatible with the prevailing progress of health care to which the public has been accustomed. If the public continues to demand their right to health care and the government expects the best of medical care, someone must pay the bill.

Where and when did legal precedent arise that allows the Federal Government to control justifiable fees of any profession, legal or medical? No one, except a *Wall Street Journal* reporter, questioned the $20,000,000.00 legal fee charged an industrial corporation for two weeks' work in 1989. Had any doctor or clinic in the U.S.A. made such a ridiculous charge to save a life, whether it required two weeks or six months, the fee would not have been paid and that physician or clinic would have been sanctioned and ridiculed by peers and would in turn have subjected itself to prosecution by the Federal Government. What is life worth to one and one's family, whether he be doctor, lawyer, politician or a member of our Congress? In the eyes of the Federal Government, is life expendable in an effort to balance the budget and worth less than the legal vitality of an industrial corporation?

It appears the Medicare program has been squeezed to an irreducible minimum and changes are in order. No program of health care will ever be successfully implemented by force or intimidation. The future success of Medicare will depend upon many changes, e.g., elimination of discrimination; correction of the mal-distribution of physicians and fees; the eradication of the dangerous practice of overshadowing physician's medical decisions by non-medical and inexperienced persons; the redefining of the definition for quality care and the setting of new guidelines with acceptable legal standards to meet the dwindling Medicare budget; discontinuation of the red tape and harassment which, by usurping valuable time of the physician, precludes good medical care and adds additional expense, and last but not least, the building of incentives into the program.

The legalization of passive and/or active euthanasia as a means of cost control of health care of our expanding "Graying America" may soon be bitterly debated, contrary to medical ethics and corrosive to the professional virtue of medicine.

The recent practice of Medicare stating that the physician has, or is, treating his patients on too high a level of medical care without Medicare having personal knowledge of the patient's clinical condition may be, in many instances, interpreted as passive euthanasia. This is inflammatory to the patient's family and to the public.

It is hopeful that Congress in its wisdom will recognize and attempt to correct these mal-functioning elements. The international scenario and the prospects of the "Peace Dollar" may help our economy and in turn benefit the health care of our increasing number of senior citizens.

The medical profession, too, must assume its responsibility in its efforts to improve the delivery of the best medical care in this world, e.g., encourage C.M.E., continue peer review, hold the line on cost compatible with good care, reassess the legal aspects and advisability of affiliations with third party organization (H.M.O., P.P.O., etc.), and with the strength of organized medicine continue the struggle to overcome the present problems. His instruction to his patients were commands to be followed without question. That image has faded in recent years, in spite of the many remarkable innovations and phenomenal strides in the health care field.

Prospective medical students, as they stand at the threshold of their career, seeking their life vocation, are ever mindful and influenced by the problems they see, the greatest of which appears to be government medicine. The malpractice litigations are not serious detriments as they see progress toward moderation with improving quality care and increasing tort control. However, government interference appears progressive and beyond control with its irreconcilable trend, prevailing fee discrimination and oppressive bureaucratic edicts to the point of near subjugation of the medical profession in a futile attempt to balance cost with budget. This offers little allure for prospective students since they have many

other choices.

It is true that cost control has been a problem and Medicare must stay within the budget. But the laws of nature have told us for centuries, as the medical profession advised Congress in 1964, that any program of free health care offered to the public would be abused by both beneficiary and provider and would overwhelm the national budget. Too, since 1965, the Congress has encouraged utilization by tacking on many expensive health care obstacles that threaten the future of good medicine.

One should view the paucity of applicants to our medical schools as a serious threat for the future. This is a changing world and we must "Roll With the Punches," but if we, as a caring profession, expect to survive and grow with dignity and respect, we must "hold the line," and in the interim we must begin to ferret out and recruit the best of our youth that they might continue the struggle to maintain quality care for our patients, against whatever obstacles there might be.

Advising one of his or her life work is a serious matter, not to be treated lightly or in a self-serving manner. In the light of our past experiences and our present knowledge of the quagmire of problems facing the medical profession today, it is difficult to transgress one's conscience when one talks to and advises a prospective student. We must be fair and at the same time be prepared to present the cons as well as the pros intertwined with a great deal of philosophy of life and living.

A few pertinent questions may assist in an appraisal of each student, will focus our attention upon the better qualified and at the same time will focus the student's attention upon the realities of professional life and the rewards of being a good doctor; e.g., (1) What is your philosophy of life and what is your goal? (2) What does it take to make you happy? (3) Do you love to help others do things they can't do for themselves? (4) Are you willing to accept at least 50% of your expected compensation for the self-satisfaction of having done a good job and a good deed for someone sick, lame or disabled? (5) Does your life-style demand wealth and is making a lot of money your ambition and goal? (6) Are you prepared and are you willing to devote long hours of work and study and bear the heavy expense required to obtain a medical education? (7) Will the constant and increasing demand for your services as a doctor be a nuisance to your home life? (8) Do the vicissitudes of government medicine and prospects of socialized medicine discourage you?

The medical profession is an honorable profession and the study of medicine is considered the best education one may obtain in America today. It is filled with the greatest opportunities to satisfy that hunger and desire to help others, command the respect of one's community and peers for a job well done and reap the benefits and satisfaction of close relations with the family life of one's patients. Then, when the gray shadows of retirement begin to fall, one may have the privilege and satisfaction of reflecting upon a long and happy journey through life filled with memories of duties well performed in the service of mankind. "The true measure of a man's worth is determined by the sum of what he owns that money cannot buy and death cannot take away." (author unknown)

The practice of medicine has much to offer the students of the future generation whose goal is not seeking wealth but who are dedicated to the welfare of their fellowman. Although the cost is great, the practice of medicine remains a challenge worthy of the effort.

J. T. Davis, MD
Corinth, MS

Medico-Legal Brief

$157,888 in Damages Awarded to Attorney Who Was Fired

An attorney was entitled to $107,888.18 in compensatory damages and $50,000 in punitive damages from his former employer who fired him a week after he was diagnosed as having AIDS, a federal trial court in Pennsylvania ruled.

The attorney was employed as a regional partner for a national legal services firm. Although the attorney expressed dissatisfaction about parts of his job that he disliked and about the direction the firm was taking, he was given a ten percent raise after only six months in his position. On July 13, 1987, he entered a hospital with pneumocystis pneumonia. Three days later he was diagnosed as having AIDS. On the 21st of July his superior visited him in the hospital, and the attorney told him that he had AIDS.

The attorney's superior talked to the attorney's physician the next day. The physician told him the general facts about AIDS patients, their prognosis, and their general ability to return to to work, but cautioned the superior that it could not be determined during the first hospitalization what course the patient's AIDS would take. The firm's management decided to fire the attorney because he would become disabled and because having a re-

gional partner with AIDS would damage the morale of the office.

The attorney was so upset and angry about the prospect of losing his job that his physician told the attorney's superior that he should not visit the attorney again until he had an opportunity to recover. The attorney did not learn that he had been fired until his replacement called him. The next day his superior met with him at home and gave him his options: a $12,000 severance package, a staff attorney position at half his former pay, or assistance in securing placement in an experimental AIDS treatment program.

On August 5, the firm placed him on a three-month medical leave of absence and removed him from the payroll. He filed a complaint with the Pennsylvania Human Relations Commission. During a meeting in the Commission's offices the firm offered to pay him complete back pay and reinstate him to employment comparable to his old job at the same rate he was paid before. He rejected the proposal and filed suit.

The court concluded that the attorney was fired because of a non-job-related handicap and that the firm made no effort to accommodate his disability. The court awarded him $38,696.55 in back pay and $4,191.63 interest covering the period from his firing until the firm's offer of reinstatement. In addition, the court awarded him $65,000 for mental anguish and humiliation caused by the firm's actions. Finally, the court awarded $50,000 in punitive damages. The firm's conduct was so outrageous that punitive damages were warranted, the court said. — *Cain v. Hyatt,* Civil Action No. 88-6665 (D.C., Pa., April 3, 1990)

President's Page

(Continued from page 302)

what we consider ''too low'' payments by third party payors. That is something for the patient or beneficiary to decide when he purchases his health insurance.

Payors lack the expertise to accurately assess the technical aspects of surgical procedures and they must, to a large extent, rely on the honesty and integrity of the surgeon. Insurer's often find it difficult to distinguish which procedures are inherent to a specific operation and which ones are clearly distinct and therefore deserving of a separate charge.

This ''unbundling'' or ''creative coding'' has certainly increased the incomes of some doctors. We don't know how widespread this practice is, but we hope it is minimal. Significant changes are being made to more precisely define reimbursable units for surgical services. The American Academy of Orthopaedic Surgeons has prepared a draft of a publication entitled ''Intraoperative Global Services Data for Orthopaedic Surgery — Draft.'' This draft is currently being circulated and many insurance carriers are using it as a guideline. It lists the usual and customary procedures done in the operating room as a ''bundle'' for three hundred Orthopaedic procedures. For example, CPT code number 64721 includes (as part of the intraoperative service) surgical approach, isolation of neurovascular structures, epineurolysis, flexor tenosynovectomy, Z-plasty of transverse carpal ligament, division of transverse carpal ligament, synovial biopsy and excision of carpal mass.

The Physician Payment Review Commission (established by Congress) is probably going to recommend that this global fee for the above procedures also include the pre-operative visit at the hospital on the day prior to and the day of surgery, all care (except complications or very unusual circumstances) rendered in the institution, plus all office visits for ninety days post-operatively. Isn't that what most of us have been doing for a long time?

Those surgeons who have practiced ''unbundling'' will suffer financially as this all-inclusive approach to reimbursement is adopted. Some will probably search out and find alternative ways to increase their fees with other forms of ''creative billing.'' This practice of ''creating'' a separate charge for a component service that should have been included in the primary charge is a simple act of dishonesty. Ethical physicians must not tolerate this action. We must denounce it.

MEDICAL ORGANIZATION

MMPAC Sponsors Delta Physician Breakfast

The Mississippi Medical Political Action Committee (MMPAC) sponsored a breakfast meeting at Yianni's restaurant in Greenwood, Mississippi, Saturday, July 14, 1990 for Congressman Mike Espy. Twenty-five physicians from the Delta area attended.

Through his remarks, Congressman Espy displayed an in-depth knowledge of the problems facing rural physicians and demonstrated that rural health issues are one of his main priorities. Congressman Espy discussed the Anti-Hassle Bill, H.R. 4475, and H.R. 4495, which concerns Medicare's anti-dumping regulation, stating that he is a co-sponsor of both bills.

He also discussed the HCFA Regulations on Clinical Labs stating his intention to sign a letter from the House Rural Health Care Coalition calling for restraint in implementing CLia '88. Other areas addressed by the Congressman included Physician Payment Reform, the Rural Improvement Act, of which he is a co-sponsor, and seven House Rural Health Care Coalition Bills. He stated the goal of these seven bills is to make health care more accessible to our rural residents.

Congressman Espy ended his remarks by addressing the final report of the Lower Mississippi Delta Development Commission and how it relates to health care. Many of the recommendations from this report are aimed at solving the rural health care crisis. It addresses teenage pregnancy, prenatal care, senior citizen special health problems, lack of preventive care, and the need for more access.

At the conclusion of the breakfast meeting Congressman Espy invited comments from the physicians present on all the issues discussed. This meeting with MMPAC gave Congressman Espy the opportunity to hear on a one to one basis about problems physicians are having with governmental regulations.

UMC Announces Faculty Promotions

Thirty-seven have been named in faculty promotions at the University of Mississippi Medical Center for the coming academic session.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the promotions following approval by the Board of Trustees of State Institutions of Higher Learning. The promotions included 17 in the School of Medicine, three in the School of Nursing, six in the School of Health Related Professions, six in the School of Dentistry, and five centerwide.

Promoted to the rank of professor in the School of Medicine were Dr. Benjamin F. Banahan, Jr., professor of family medicine; Dr. Kent A. Kirchner, professor of medicine and associate professor of physiology and biophysics; Dr. Stanley M. Chapman, professor of medicine; Dr. S. H. Subramony, professor of neurology; Dr. James N. Martin, Jr., professor of obstetrics and gynecology; and Dr. Suman K. Das, professor of surgery.

In School of Dentistry promotions, Dr. James W. O'Hara was named professor of restorative dentistry.

Centerwide promotions included Dr. Stephen T. Case and Dr. Jonathan B. Chaires, both elevated to the rank of professor of biochemistry.

Named associate professor in the medical school were Dr. Judith G. Gearhart, associate professor of family medicine; Dr. A. Wallace Conerly, UMC assistant vice chancellor, Dr. Tawfig I. Khansur and Dr. Bruce W. Lambuth, associate professors of medicine; Dr. Jimmy D. Miller, associate professor of neurosurgery; Dr. Ronald P. Krueger, associate professor of pediatrics; Dr. David E. Conwill, associate professor of preventive medicine; Dr. Thomas Milhorn, associate professor of psychiatry and human behavior; and Dr. Ralph Didlake, associate professor of surgery.

In the School of Nursing, Kathryn R. Kolar and Maureen G. Propst were named associate professors of nursing.

Promotions in the School of Health Related Professions included Paula Stubbs, associate professor of respiratory therapy; Lois B. Jones, associate professor of medical technology; and Patsy L. Hester, R. Edwin King, and J. David Allison, associate professors of interdisciplinary and cooperative education.

School of Dentistry promotions to associate professor included Dr. David L. Lentz, Dr. Gary W. Reeves and Dr. James G. Fitchie, associate professors of restorative dentistry.

In Centerwide promotions, Dr. Victor L. Davidson, was named associate professor of biochemistry: Dr. V. Gregory Chinchar, associate professor of microbiology; and Dr. Angel K. Markov, associate professor of physiology and biophysics.

Promoted to the rank of assistant professor in the medical school were Dr. Holly H. Peeples, assistant professor of family medicine; and Dr. Donna C. Sullivan, assistant professor of medicine.

In the nursing school, Shirley S. Powell was promoted to assistant professor of nursing.

Maureen A. Hardy was promoted to assistant professor of physical therapy in the School of Health Related Professions.

Promotions to assistant professor in the dental school included Dr. Ray Holder, Jr., assistant professor of restorative dentistry; and Dr. Karen C. Crews, assistant professor of diagnostic sciences.

Dr. Banahan, a member of the Medical Center faculty from 1973-1978, was appointed associate professor of family medicine and director of special projects for the department in 1989. He earned the MD in 1957 at Tulane University and took his internship and residency at the University of Mississippi Medical Center. He was associate professor of family medicine at the University of Alabama in Huntsville before coming to the Medical Center.

Dr. Kirchner was named assistant professor of medicine and assistant professor of physiology and biophysics at the Medical Center in 1979 and co-director of the Mississippi Transplant Program in 1980. He was promoted to associate professor of medicine in 1983 and was appointed a member of the graduate faculty in 1985. He earned the MD in 1973 at the University of Virginia and took his internship, was chief resident in medicine, and a renal fellow at the University of Kentucky Medical Center, where he was instructor in medicine before his Medical Center appointment.

Dr. Chapman was appointed to the Medical Center faculty as assistant professor of medicine in 1979, was named to the graduate faculty in 1983, promoted to associate professor of medicine in 1984, and named director of the Division of Infectious Diseases and associate professor of microbiology in 1988. He also has been chief of the Infectious Diseases Section of the Department of Veterans Affairs Medical Center since 1979, and was chief of the medical service there from 1983-1988. He has been Lieutenant Colonel in the Mississippi Air National Guard since 1986. He earned the MD in 1972 at the University of Rochester and took his internship and residency at Emory University affiliated hospitals, followed by a fellowship in allergy and clinical immunology at the Laboratory of Clinical Investigation of the National Institute of Allergy and Infectious Diseases, National Institutes of Health at Bethesda, MD. He also took a fellowship in infectious diseases at the University of Rochester School of Medicine and Dentistry, where he was instructor in medicine (infectious diseases) from 1977-1979.

Dr. Subramony joined the Medical Center faculty in 1979 as assistant professor of neurology and was promoted to associate professor of neurology and director of the EMG laboratory at the University Hospital in 1985. He also has been co-medical director for the Muscular Dystrophy Association Clinic at the Children's Rehabilitation Center since 1987. Dr. Subramony earned the MBBS in 1971 and the MD in 1974 at Delhi University in New Delhi, India. He took his internship at Macneal Memorial Hospital in Berwyn, Ill., followed by fellowships in neurology and electromyography at the Cleveland Clinic, which he completed in 1979.

Dr. Martin was appointed to the Medical Center faculty in 1981 as assistant professor of obstetrics and gynecology, and was promoted to the rank of associate professor in 1985. He earned the MD in 1973 at the University of North Carolina at Chapel Hill and took his internship and residency at the North Carolina Memorial Hospital, followed by a clinical research fellowship at the Prostaglandin Task Force Research Unit of the World Health Organization at Karolinska Hospital in Stockholm, Sweden, and a fellowship in obstetrics and gynecology at the University of Texas Health Science Center and the Southwestern Medical School Parkland Hospital in Dallas. Before coming to the Medical Center, he had been a member of the faculty at the University of Michigan Medical Center (UMMC) as assistant professor since 1979. He also was director and chief of obstetric intensive care and delivery, chief of the obstetrics service, and director of the antenatal diagnostic unit and the Division of Maternal/Fetal Medicine and fellowship program at the UMMC Women's Hospital at Ann Arbor, Mich. since 1980.

Dr. Das came to the Medical Center in 1982 as a resident and instructor in surgery (plastic) and in 1983, was appointed chief resident. He moved through the ranks to assistant professor of surgery (plastic) and chief of plastic surgery in 1986, associate professor of surgery (plastic) and assistant professor of orthopedic surgery in 1987, and professor of surgery (plastic) in 1990. He earned his medical degree in 1966 at the R. G. Kar Medical College and Hospital in Calcutta, India, where he took an internship and general surgery residency.

He also took residencies in the United Kingdom at the Royal Infirmary in Bolton-Lancs and at the Royal United Hospital and St. Martin's Hospital in Bath, the Frenchay Hospital in Frenchay, Bristal, and the Royal Victoria Infirmary, General Hospital and Fleming Memorial Children's Hospital in Newcastle-Upon-Tyne. He was a fellow in plastic and reconstructive surgery at the Hospital for Sick Children in Toronto, Ontario, Canada, and in microsurgery and plastic surgery at St. Vincent Hospital in Melbourne, Australia, and a research associate and co-director of the microsurgery training program at the Harbour/UCLA Medical Center before coming to the Medical Center.

Dr. O'Hara was appointed associate professor of restorative dentistry at the Medical Center in 1980. He earned the DDS in 1954 at the University of Pennsylvania and was in private practice in Miami before joining the dental staff at the U.S. Air Force Hospital at Keesler, AFB. He also was a member of the dental staff at the USAF Dental Clinic at Weisbaden, Germany, the USAF Regional Hospital at Chanute AFB, Ill., and the USAF Hospital at Plattsburgh, N.Y., before taking a residency in general dentistry at the Naval Graduate Dental School from 1972-1973. He earned the MS in oral biology in 1973 at George Washington University, then joined the dental taff at the USAF Clinic at Hickam AFB, Hawaii as chief of operative dentistry and preventive dentistry officer. He had been chief of professional services and operative dentistry at the USAF Hospital at Barksdale AFB, Louisiana since 1979 before coming to the Medical Center.

Dr. Case was appointed to the Medical Center faculty in 1979, as assistant professor of biochemistry and was promoted to associate professor in 1983. He earned the MS in 1971 at Wilkes College at Wilkes-Barre, Pa., and the PhD in 1974 at the University of Southern California at Los Angeles, Calif. He took his postdoctoral fellowship in histology at the Karolinska Institute at Stockholm Sweden, and had been a postdoctoral associate in biology at Yale University since 1977.

Dr. Chaires was appointed to the Medical Center faculty as assistant professor of biochemistry in 1981, and was promoted to associate professor in 1986. He earned the PhD in 1978 at the University of Connecticut and was a National Institutes of Health Postdoctoral Fellow at Yale University from 1978-1981.

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NEW MEMBERS

Arora, Rajinder K., Jackson. Born Delhi, India, Nov. 29, 1952; M.D., Maulana Azad Medical College, Delhi University, New Delhi, India, 1970; internship and residency Louisiana State University School of Medicine, New Orleans, LA, 1981-83; elected by Central Medical Society.

Aust, Dennis Wayne, Jackson. Born Lexington, MS, July 13, 1959; M.D., University of Mississippi School of Medicine, Jackson, MS., 1984; internship and pediatric residency, University of Mississippi Medical Center, Jackson, MS, 1984-1987; elected by Central Medical Society.

Benefield, Donald Warren, Gulfport. Born Gulfport, MS, March 22, 1960; M.D., Tulane University School of Medicine, New Orleans, LA, 1986; interned Ochsner Memorial Foundation, and ophthalmology residency Tulane Medical Center, New Orleans, LA, 1986-90; elected by Coast County Medical Society.

Blanchard, Bertha Junkin, Whitfield. Born Natchez, MS, March 18, 1957; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; internship and neurology residency, University of Mississippi Medical Center, Jackson, MS, 1986-90; elected by Central Medical Society.

Brahan, John Weakley, Hattiesburg. Born Memphis, TN, Nov. 10, 1959; M.D., University of Mississippi School of Medicine, Jackson, MS, 1985; internship and residency, University of Mississippi Medical Center, Jackson, MS, 1985-90; elected by South Mississippi Medical Society.

Braswell, Ronald Alvin, Grenada. Born Jackson, MS, Sept. 16, 1960; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; interned Methodist Hospital, Memphis, TN, 1986-87 and ophthalmology residency, University of Tennessee College of Medicine, Memphis, TN, 1987-90; elected by North Central Medical Society.

Bucci, Richard Alan, Jackson. Born Hackensack, NJ, March 9, 1946; M.D., Facultad de Medicina de la Universidad de Barcelona, Barcelona, Spain, 1969; internship and emergency medicine residency, Charity Hospital, New Orleans, LA, 1977-80; elected by Singing River Medical Society.

Capocasale, Randolph Martin, Meridian. Born New York, NY, July 1, 1952; M.D., Case Western Reserve University School of Medicine, Cleveland, Ohio; internship and residency at Oregon State Hospital, Portland, Oregon, 1984-88; elected by East Mississippi Medical Society.

Chance, Rickey Lynn, Laurel. Born Meridian, MS, Jan. 1, 1958; M.D., West Virginia School of Osteopathic Medicine, Lewisburg, West Virginia, 1988; internship and residency University of Mississippi Medical Center, 1987-90; elected by South Mississippi Medical Society.

Clarite, Henry Aranas, Gulfport. Born Philippines, May 25, 1945; M.D., College of Medicine Cebu Institute of Technology, Cebu City, Philippines, 1967; internship Edgewater Hospital, Chicago, IL, 1974-75 and residency Masonic Medical Center, Chicago, IL, 1975-78; elected by Coast Counties Medical Society.

Condon, Gregory J., Hattiesburg. Born New Orleans, LA, Oct. 31, 1946; M.D., University of Tennessee College of Medicine, Memphis, TN, 1981; internship and residency University of Tennessee Center for Health Sciences, Memphis, TN, 1982-87, elected by South Mississippi Medical Society.

Cunha, Olimpio Ferreira, Columbus. Born Goias, Brazil, May 20, 1956; M.D., Universidade Federal do Para, Faculdade de Medicina, Para, Brazil, 1980; internship Goiania General Hospital, Goiania, Brazil, 1982-84, neurology residency, Medical College of Pennsylvania, Philadelphia and EEG & sleep medicine residency Hahnemann University School of Medicine, Philadelphia, PA, 1987-88; elected by Prairie Medical Society.

Edwards, Thomas Craig, Jackson. Born Kennett, MO, Dec. 29, 1956; M.D., University of Missouri School of Medicine, Columbia, MO, 1984; internship and residency University of Tennessee Center for Health Sciences, Memphis, TN, 1984-87; elected by Central Medical Society.

Eggen, Jon Todd, Jackson. Born Omaha, Neb., Feb. 27, 1958; D.O., University of Osteopathic Medicine and Health Sciences, Des Moines, Iowa, 1984; internship Botsford General Hospital, Farmington Hills, Michigan, 1984-85 and residency University of Mississippi Medical Center, Jackson, MS, 1987-90; elected by Central Medical Society.

Fagan, J. David, Vicksburg. Born Ottumwa, Iowa, August 24, 1955; M.D., University of Texas Medical Branch, Galveston, TX, 1984; internship and residency, same, 1984-90; elected by West Mississippi Medical Society.

Feldman, Sandor, Jackson. Born New York, NY, Dec. 8, 1940; M.D., University of Louisville School of Medicine, Louisville, KY 1967; internship Downstate University, Kings County Medical Center, Brooklyn, NY, 1967-68 and pediatric residency, Louisville General Hospital, Louisville, KY, 1968-69, radiology residency, Wadsworth VA Hospital, Los Angeles, CA 1969-70; elected by Central Medical Society.

Finch, Charles David, Jr., Hattiesburg. Born Jackson, MS, Sept. 29, 1990; M.D., University of Mississippi School of Medicine, Jackson, MS, 1984; internship and internal medicine and nephrology residencies, same, 1984-89, elected by South Mississippi Medical Society.

Frazier, Sandra Lynn, Jackson. Born, Greenville, MS, Jan. 2, 1961; M.D., University of Mississippi School of Medicine, Jackson, MS, 1987; internship and residency, same, 1987-90; elected by Central Medical Society.

Fulton, Lorelie Josephine, Jackson. Born San Antonio, TX, May 12, 1959; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; internship and residency, Tulane Affiliated Hospitals, New Orleans, LA, 1986-90; elected by Central Medical Society.

Gates, Thomas Gerald, Jackson. Born Monroe, LA, Nov. 3, 1961; M.D., Louisiana State University School of Medicine, New Orleans, LA, 1986; internship and residency, University of Mississippi Medical Center, Jackson, MS, 1986-90; elected by Central Medical Society.

Hall, Terrence Joseph, Jackson. Born Evergreen Park, IL, Nov. 19, 1951; M.D., University of Illinois College of Medicine, Chicago, IL, 1983; internship and residency, University of Illinois Cook County Hospitals, Chicago, IL; elected by Central Medical Society.

Havens, Michael Randolph, Grenada. Born Grenada, MS, June 19, 1961; M.D., University of Mississippi School of Medicine, Jackson, MS, 1987; internship and family medicine residency, University of Mississippi Medical Center, 1987-90; elected by North Central Medical Society.

McKellar, David Loflin, Hattiesburg. Born Laurel, MS, April 13, 1960; M.D., Louisiana State University Medical Center, Shreveport School of Medicine, Shreveport, LA, 1986; internship and residency, University of Texas Medical Branch, Galveston, TX, 1986-90; elected by South Mississippi Medical Society.

Mendenhall, Teresa Moore, Jackson. Born Tupelo, MS, August 4, 1961; M.D., University of Mississippi School of Medicine, Jackson, MS, 1987; internship and residency, University of Mississippi Medical Center, 1987-90; elected by Central Medical Society.

Morris, R. Tim, Vicksburg. Born Memphis, TN, Dec. 25, 1960; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; internship and residency, Carraway Methodist Hospital, 1987-90; elected by West Mississippi Medical Society.

Ness, Marsha Jean, Ridgeland. Born Kalamazoo, MI, Nov. 14, 1958; M.D., University of Texas Southwestern Medical School, Dallas, TX, 1984; internship and residency University of Nebraska Medical Center, Omaha, NE; elected by Central Medical Society.

Peasley, Daniel Josef, Laurel. Born Burlington, Iowa, Oct. 6, 1958; D.O., Kirkville College of Osteopathic Medicine, Kirksville, MO, 1985; internship Normandy Osteopathic Hospital, St. Louis, MO, 1985-86, internal medicine residency, same, 1986-87, gastroenterology fellowship Oakland General Hospital, Madison Heights, MI, 1988-90; elected by South Mississippi Medical Society.

Pigott, Charles Gregory, Tupelo. Born Picayune, MS, July 23, 1957; M.D., University of Mississippi School of Medicine, Jackson, MS, 1985; internship and residency, University of Mississippi Medical Center, 1985-90; elected by Northeast Mississippi Medical Society.

Pruett, Jack Bruce, Laurel. Born Gainesboro, TN, March 5, 1951; M.D., University of Tennessee College of Medicine, Memphis, TN, 1973; internship and general surgery residency, University of Tennessee, Chattanooga, TN, 1977-82; elected by South Mississippi Medical Society.

Reddix, Michael Anthony, Jackson. Born Meridian, MS, May 21, 1957; M.D., Tufts University School of Medicine, Boston, MA, 1984; internship University of Texas Medical Branch, Galveston,TX, 1984-85 and residency Henry Ford Hospital, Detroit, MI, 1985-88; elected by Central Medical Society.

Ross, Jeffery Duncan, Brookhaven. Born Alamo,TN, July 17, 1960; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; internship and residency University of Mississippi Medical Center, 1986-89, residency University of Kentucky, Lexington, KY, 1989-90; elected by South Central Medical Society.

Ruhl, Forster Gehring, Jr., Yazoo City. Born Summit, NJ, Dec. 8, 1957; M.D., University of Medicine & Dentistry of New Jersey Medical School, Newark, NJ, 1987; internship and residency Somerset Medical Center, Somerville, NJ, 1987-90; elected by Delta Medical Society.

Shaw, Fredrick C., Vicksburg. Born Clarksdale, MS, April 18, 1955; M.D., Washington University School of Medicine, St. Louis, MO, 1982; internship LeBonheur's Children's Hospital, Memphis, TN, 1982-83 and residency University of Mississippi Medical Center, Jackson, MS, 1983-84; elected by West Mississippi Medical Society.

Shumaker, Grace Garretson, Jackson. Born Miami, FL, August 17, 1960; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; internship and residency University of Mississippi Medical Center, Jackson, MS, 1987-89, chief resident 1989-90; elected by Central Medical Society.

Sierra, Francisco Javier, Biloxi. Born Tegucigalpa, Honduras, July 10, 1955; M.D., Facultad de Ciencias Medicas, Universidad Autonoma de Honduras, Tegucigalpa, Honduras, 1981; internship and internal medicine and cardiovascular diseases residencies, Tulane University School of Medicine, New Orleans, LA, 1984-89; elected by Coast Counties Medical Society.

Smith, James Clinton, Jackson. Born Brookhaven, MS, August 7, 1939; M.D., Marquette University, Milwaukee, Wisconsin, 1967; internship Milwaukee Children's Hospital, Milwaukee, Wis., 1967-68 and residency University of Minnesota Medical School, Minneapolis, Minnesota, 1970-73; elected by Central Medical Society.

Thompson, Timothy Frank, New Albany. Born Ripley, MS, Jan. 15, 1959; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; internship and residency Tuscaloosa Family Practice,Tuscaloosa, AL, 1986-89; elected by Northeast Mississippi Medical Society.

Tucker, James Martin, Jackson. Born Washington, D.C., Nov. 16, 1958; M.D., University of Mississippi School of Medicine, Jackson, MS, 1984; internship and obstetric/gynecology residency and maternal-fetal medicine residency, University of Mississippi Medical Center, 1984-90; elected by Central Medical Society.



Williams, Alan Thorne, Columbus. Born Greenwood, MS, Feb. 13, 1959; M.D., Vanderbilt University School of Medicine, Nashville, TN, 1985; internship Vanderbilt Medical Center, internal medicine residency, and gastroenterology fellowship, same, 1985-90; elected by Prairie Medical Society.

Winkelmann, Michael Joseph, Jackson. Born St. Louis, MO, Feb. 2, 1960; M.D., University of Missouri School of Medicine, Columbia, MO, 1986; internship St. Johns Mercy Medical Center, 1986-87, and emergency medicine residency University of Mississippi Medical Center, 1987-90; elected by Central Medical Society.

Wright, Timothy Terrell, Oxford. Born Booneville, MS, March 12, 1955; M.D., University of Mississippi School of Medicine, Jackson, MS, 1984; internship University of Mississippi Medical Center, internal medicine and cardiology residencies, same, 1984-90; elected by North Mississippi Medical Society.

Young, Moses Collier, McComb. Born Leland, MS, July 1, 1949; Temple University School of Medicine, Philadelphia, PA, 1981; internship Charity Hospital of New Orleans, LA, 1981-82 and residency Tulane University Affiliated Hospital 1982-85; elected by South Central Medical Society.

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Physicians Recognition Award

Fourteen MSMA members were named recipients of the AMA Physicians' Recognition Award during July, 1990. This award is presented by the American Medical Association to physicians who have voluntarily completed a minimum of 50 hours of continuing education within a one-year period. Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours of CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1. These fourteen individuals are presented below by medical society.

Central
Douglas Edward Gorman, M.D.

Clarksdale & 6 Counties
Frank T. Marascalco, M.D.
Charles Lamar Nause, M.D.
Pravinchandra P. Patel, M.D.

Delta Medical
Hernando Cartes Payne, M.D.

Desoto County
Henry M. Wadsworth, M.D.

East Mississippi
William M. Gillespie, M.D.
John James Purdy, M.D.

Northeast
Kenneth Rowland Cargile, M.D.

Singing River
Gary Henry Groff, M.D.

South Central
Elmo Pierce Gabbert, M.D.
Fred James McDonnell, M.D.

South Mississippi
Richmond L. Alexander, M.D.
Gordon Spencer McHenry, M.D.

PERSONALS

Bryan Barksdale, of Jackson was recently elected president-elect of the Mississippi Affiliate of the American Heart Association.

Wesley S. Bennett has associated with the Internal Medicine Clinic, 1504-20th Avenue, Meridian, MS in the practice of cardiology.

John W. Brahan has associated with the Hattiesburg Clinic for the practice of general, thoracic and vascular surgery.

Ronald A. Braswell has associated with the Braswell-Campbell Eye Clinic for the practice of ophthalmology.

Richard C. Boronow announced the relocation of the Boronow Clinic, P.A. to Medical Arts East, Suite 402, 1190 North State Street, Jackson.

Sandra F. Burford was guest speaker at an Occupational Medicine Conference sponsored by the University of Mississippi School of Medicine.

Gregory J. Condon has associated with the Hattiesburg Clinic in the practice of neurology, epilepsy and clinical neurophysiology.

Eric M. Dyess has associated with the Meridian Medical Associates, P.A. Clinic in the practice of endocrinology and internal medicine.

Lori J. Fulton announces the opening of her practice in obstetrics and gynecology, Hinds Professional Building, Suite 320, 1815 Hospital Drive, Jackson.

George C. Furr of Clarksdale was named to the Board of Directors of American Cancer Society, Mississippi Division, at the organization's annual meeting in Jackson on June 12.

Mack C. Furr of Jackson Oncology Associates has recently become board certified in medical oncology.

Bob Gannaway has associated with Copiah Medical Associates.

Thomas S. Glasglow has associated with Prentiss Morris Parsons of Medical Associates of Choctaw County, P.A.

Bobby L. Grahman, Jr. of Jackson Oncology Associates has recently become board certified in medical oncology.

Elizabeth Connell Henderson, of Jackson, is pleased to announce her recent marriage to James Keeton Henderson. Dr. Henderson is in the private practice of psychiatry.

James R. Hubbard, Jr. announces the opening of his practice of Family Medicine, 848 South Madison Street, Tupelo.

James A. Jefferson, board certified in family medicine, has associated with **Homer H. Williams, P.A.** at 1211 Lexington Street, Pickens.

Virginia A. Jones announces the relocation of her office to 1045-B North Flowood Dr., Jackson, for the practice of obstetrics and gynecology.

S. Albert Johnson, Jr. has associated with **Steven E. Zachow,** and **David A. Wahl** for the practice of radiation therapy and oncology.

Eric Lindstrom of Laurel was recently reappointed by the Jones County Board of Supervisors to serve a third term on the board of trustees of South Central Regional Medical Center.

Roland J. Mestayer, III, has associated with the Singing River Radiology Group in the practice of diagnostic radiology.

John Mutziger has associated with Family Medical Group in the practice of family medicine.

Michael T. Nicholson announces the relocation of his family practice to Primary Care Associates, P.A., 1730 14th Street, Meridian.

Lyndon H. Perkins of Tupelo was the guest speaker at the North MS Regional Respiratory Therapy Association meeting. The topics discussed were "Sleep Apnea" and "Advances in Bronchoscopy." He also made presentations to the Decatur, AL, Medical Society, Baptist Hospital Booneville, Medical Staff, North MS Association of Critical Care Nurses and the Iuka Medical Staff.

Melinda Ray has associated with the Children's Medical Group, P.A., Jackson for the practice of pediatrics.

Forster G. Ruhl, Jr. has associated with **David Gilder** and **William Thompson** of the Yazoo City Medical Clinic in the practice of family medicine.

Robert L. Saulters has associated with the Medical Clinic P.A., Jackson for the practice of internal medicine.

Jack Senter of Belmont was honored with a reception celebrating 40 years of practice.



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PERSONALS/Continued

David Simmons has associated with Grenada Lake Medical Center for the practice of pediatrics and adolescent medicine in conjunction with **James W. Fite** of Grenada Children's Clinic.

Lisa Stone has associated with the Children's Medical Group P.A., Jackson for the practice of pediatrics.

Clinton Smith, former director of Mississippi's Medicaid program, has joined the teaching staff of UMC as assistant professor in the pediatrics and preventive medicine programs.

Margaret M. Glynn has associated with the Seagers Clinic for the practice of pediatrics and general medicine.

Lt. Col. Hildon H. Sessums, Jr. has been awarded the Meritorius Service Award for outstanding service while serving as company commander, Company C, 106th, Forward Support Battalion, Mississippi Army National Guard.

Wendy Tennyson has associated with **William F. Krooss** and **Michael H. Albert** for the practice of family medicine.

Paul Thompson has affiliated with **Nate Brown** in the Mid Delta Family Practice Clinic specializing in internal medicine and gastroenterology.

James Martin Tucker has associated with the Jackson OB-GYN Associates, P.A. in the practice of obstetrics and gynecology and the subspeciality of maternal-fetal medicine.

Henry Tyler of Jackson was recently elected President of Mississippi Affiliate of the American Heart Association.

J. Lee Valentine has associated with Primary Care Associates, P.A., Meridian for the practice of family medicine.

Thad Waites of Hattiesburg was recently elected secretary of the Mississippi Affiliate of the American Heart Association. He also received the Bronze Distinguished Service Award for continuous and longstanding service to the association.

Alan T. Williams has associated with **J. S. Rawson** at Gastroenterology Associates of Columbus for the practice of gastroenterology.

Bennie B. Wright, of Inverness has been named Young Surgeon of the Year by the Mississippi Chapter of the American College of Surgeons.

Cynthia Haden-Wright has associated with Gastrointestinal Associates, P.A., Jackson, in the practice of Gastroenterology.

W. Russell Young announces the opening of his practice in family medicine at 207 West Pearl, Poplarville.

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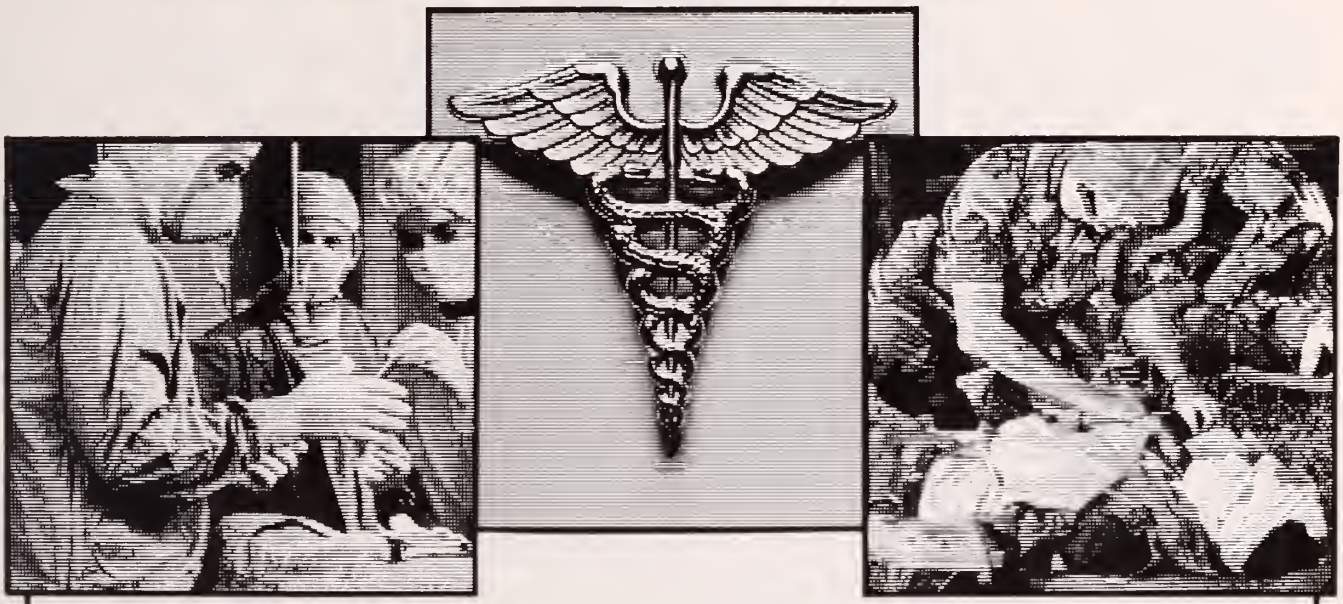
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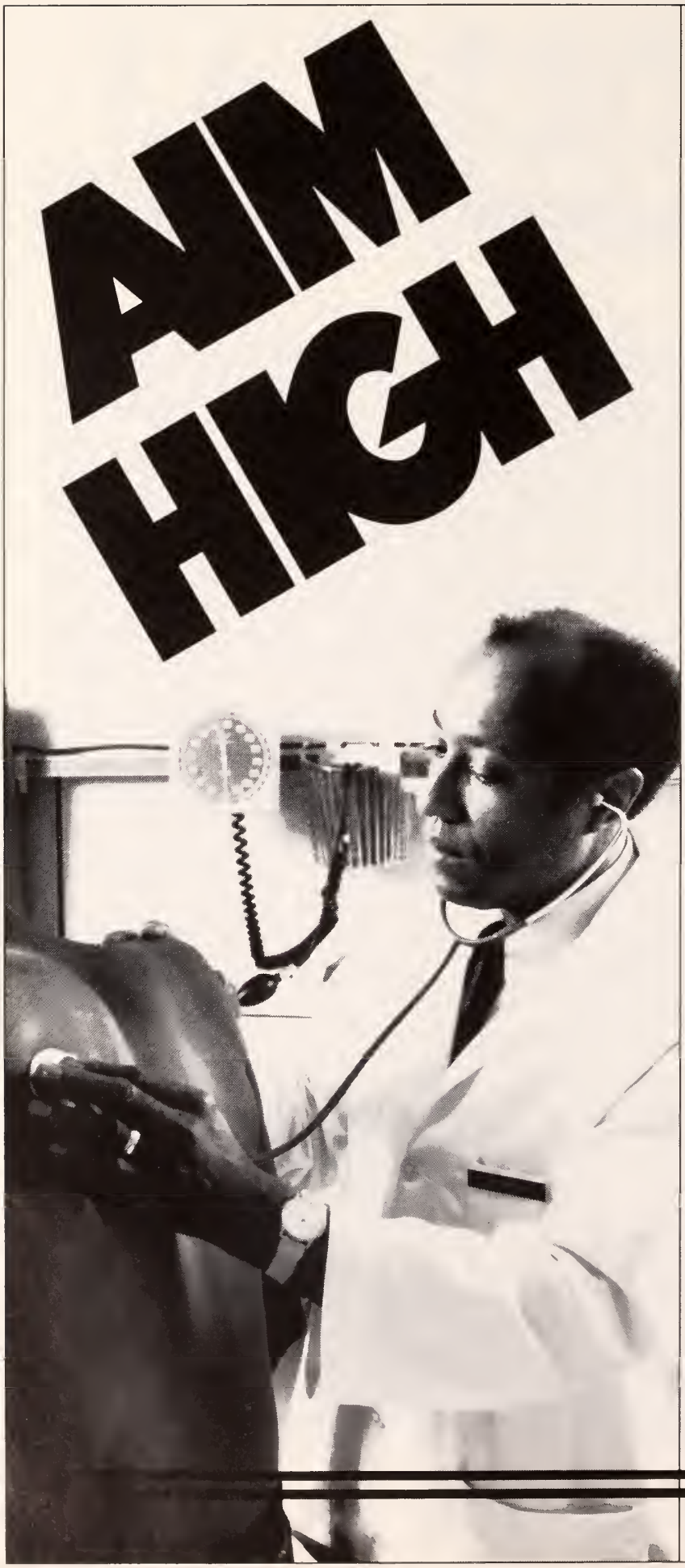
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October 1990

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ANK:tgd

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1. Richter JM, Colditz GA, Huse DM, et al. Cimetidine and adverse reactions: a meta-analysis of randomized clinical trials of short-term therapy. *Am J Med* 1989;87:278-284.

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Reversible confusional states have been observed on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, certain tricyclic antidepressants, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

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In a 24-month toxicity study in rats, at dose levels approximately 8 to 48 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

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Pregnancy Category B. Reproduction studies have been performed in rats, rabbits and mice at doses up to 40 times the normal human dose and have revealed no evidence of impaired fertility or harm to the fetus due to 'Tagamet'. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

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BRS-TG:L80B *Date of issuance Oct. 1989*

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References:

1. Data on file, G.D. Searle & Co. **2.** 1988 Joint National Committee: The 1988 report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 1988;148:1023-1038.

BRIEF SUMMARY

Contraindications: Severe LV dysfunction (see *Warnings*), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

Warnings: Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

Precautions: Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol clearance may occur with combined use. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digitoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

Adverse Reactions: Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°,2°,3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecomastia, increased urination, spotty menstruation, impotence.

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

Improving Access To Pediatric Health Care In Mississippi

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THE SURGEON GENERAL has set a national goal of reducing post-neonatal mortality rates (deaths between 30 days and 1 year) to no more than 2.5 per 1000 live births in 1990.[1] While the national rate was 3.7 in 1985, the rate of Mississippi was 5.3, placing the state at an unacceptably high level. With this understanding, the Mississippi Chapter of the American Academy of Pediatrics (MS/AAP) in conjunction with the State Department of Health began work on the Mississippi Postneonatal Death Impact Project.[2] This Project proposed to reduce postneonatal mortality and morbidity by improving access to health care. Not only did the project have an impact on the postneonatal death rate, but it established an efficient, workable model to improve child health through the complementary efforts of the public and private sectors of health care.

Dr. Abney, project director, is engaged in the private practice of pediatrics; Ms. Weaver is project coordinator and Ms. Montgomery is information and referral coordinator, Mississippi Chapter, American Academy of Pediatrics; Ms. Barber is social services director, Mississippi State Health Department; Dr. Graves, assistant professor of pediatrics at University Medical Center.

The Project

In October of 1986 MS/AAP received a three year Special Projects of Regional and National Significance (SPRANS) grant in conjunction with the Mississippi State Department of Health. The Project featured three key components: a statewide telephone information and referral service; the enlistment of primary care physicians to treat young children for acute care without specific compensation; and a public awareness campaign. Funding was approximately $30,000 a year. Project staff included two part time employees who were under the direction of a physician project director and advisory board. Office space and other support services were

made available in part by the Mississippi State Department of Health and the University of Mississippi Medical Center.

The Methods

An innovative access service, case management by telephone, featured a WATS line information and referral service. Working with an existing toll-free number through the Governor's Service Line, perinatal and child health calls were referred to the MS/AAP project. A professional telephone counselor trained in health service eligibility was utilized to respond to the requests for assistance.

Although the telephone counselor answered WATS line requests from anywhere in the State, the project initially chose a specific target population. Mississippi Health District I, a nine county area of the Delta region, was selected because it had a significantly higher postneonatal mortality rate than the rest of the state.

In order to enlist physician participation, a survey of primary care physicians was first conducted in District I to ask them to allow referral on a rotational basis of a limited number of indigent infants for whom no public resources could be found. Joining the MS/AAP in this recruitment effort were letters of support from the Mississippi State Medical Association and the Mississippi Academy of Family Physicians. In the second year physicians in two other health districts were surveyed and in the third year physicians in all remaining counties were surveyed.

The Findings

A total of 994 physicians were surveyed over the three year grant. The number of respondents were 291, representing 29 percent of the physicians contacted. Nearly all physicians responding indicated they would participate, except those who were retired or not in a practice setting. Physicians were asked to invest a limited amount of time to provide acute care for a few children and were promised no "overload" in that they could decline to treat such a patient at any time. Positive responses came from 80 pediatricians, 151 family physicians and 35 general practitioners representing 70 of the state's 82 counties.

Over 3,000 perinatal and child health calls were received by the Governor's Service Line during the three year project. Over 750 of these calls needed case management by the MS/AAP Project and most were complicated.

As detailed in Table I, the most frequent calls for assistance were those identified as Medicaid eligibility, resources for payment, and eligibility process problems. In Mississippi the responsibility for determining eligibility is contracted to the Department of Human Services from the Division of Medicaid. Over 90 calls were due to outstanding or current bill payments. There were twenty-four physician access calls. Many of the "other" category of calls were actually non medical such as: the loss of benefits due to moving, the loss of food stamps, and unemployment concerns.

TABLE 1

NUMBER OF PROBLEMS/NEEDS IDENTIFIED

Eligibility process	*151*
Medicaid eligibility	*149*
Bill payment	*92*
Access to physician	*24*
Over Medicaid service limits	*8*
Access to health department	*9*
Access to hospital	*6*
Other	*125*

Physicians also utilized the WATS line to clarify certain barriers to care. One example was in the identification of a need for "automatic infant" Medicaid coverage. After an infant left the hospital, Medicaid coverage was not automatic until an application was filed and processed. Now Medicaid accepts the mother's Medicaid number for a limited period of time and the infant is automatically covered for reimbursement for newborn follow-up care.

Barriers most frequently identified from calls were low financial eligibility levels for Medicaid and problems with resource documentation such as a car value causing ineligibility and fluctuating incomes causing discontinuous service. Other barriers identified were long waits to receive a Medicaid card, difficulties in getting applications taken, and not having appropriate documentation. Other calls concerned the inability to get timely health department appointments and the inability to make appointments due to unpaid medical bills.

As problems were identified, specific efforts were made for problem solving either directly by recommending a solution to the caller or acting as intermediary and contacting the agency in the area of concern (i.e. Department of Human Services, Division of Medicaid, or Health Department). Follow-up calls were made to be certain difficulties were resolved. Many times calls were returned through a third party when the client had no telephone. Often the telephone counselor created access by talking directly with the hospital administrator or physician rather than the front desk clerk. Table

II reflects the variety of the types of referral or interventions needed. The "other" category represented referral of calls of minimal medical relevance (i.e. Energy Assistance, United Way, and the American Diabetes Association). Twelve children ultimately needed referral to private physicians for treatment.

TABLE II

NUMBER AND TYPE OF SERVICES RECOMMENDED

Medicaid eligibility (state, district, or local)	*234*
Health department	*122*
Community health center	*19*
Private physician	*12*
Hill Burton	*11*
University Medical Center	*7*
Legal services	*7*
Mental health center	*2*
Other	*134*

A third aspect of the MS/AAP project was an awareness campaign. An advertising plan was developed to provide information statewide concerning access to health care. Public service announcements were distributed to radio and television stations and site visits resulted in the distribution of posters and project materials.

A "Healthy BIRTHday" poster drawing attention to access to health care for children and advertising the toll-free Governor's Service Line number was printed and distributed. These posters were mailed to child care centers and were distributed to convenience food stores, supermarkets, and laundromats statewide. The posters were also sent to health departments, clinics, physicians offices, hospitals, libraries, and local government officials.

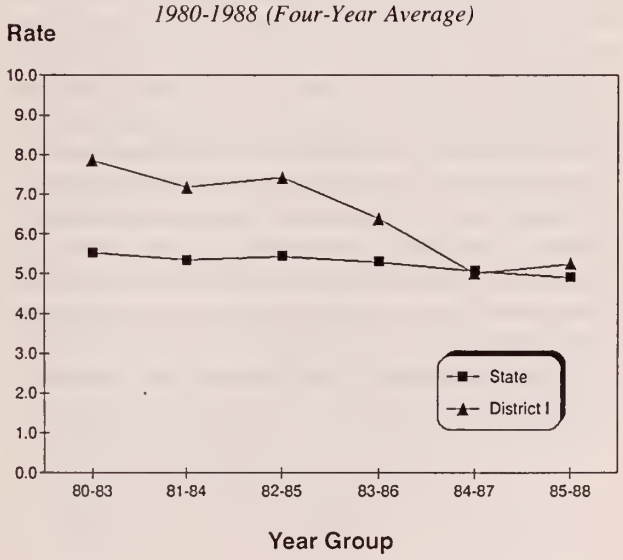
A bimonthly clinical newsletter developed by the MS/AAP was a major asset in communicating both medical and service delivery information to primary care physicians. The "Mississippi Healthy Baby Update" was mailed to 1300 physicians and health professionals statewide. Two or three original manuscript articles written by Mississippi physicians were carried in each publication. The "Update" was also used to distribute pertinent information that described Medicaid expansion for pregnant women and infants.

Outcomes

The successes of this Project are reflected not only in a marked decrease in postneonatal mortality, but also in a dramatic increase in the number of eligible children now participating in health care programs.

The project proposed to lower the postneonatal mortality rate in District I by 11.5 percent. In calculating data a four-year average rate was used (See Graph 1). The rate available when this project began (1980-1983) was 7.9/1000 births for District I. This rate had dropped by 33.2 percent since that time to 5.3/1000 births for 1985-1988. By comparison, the rate for the state dropped by only 11.2 percent for the same period. By 1987 the postneonatal mortality rate for District I was 3.5/1000 births compared to the overall state postneonatal mortality rate of 4.9/1000 births.

Graph 1. Postneonatal Mortality Rate
Mississippi vs. District I
1980-1988 (Four-Year Average)



Source: MS State Dept. of Health
Public Health Statistics

While more difficult to measure, the focused activity and publicity given to meeting the needs of these children and their families paid off in other ways. With the cooperation and leadership from the Governor and Legislators, Mississippi now leads other states in expanding Medicaid eligibility from 47 percent of the federal poverty level in 1986 to 185 percent for infants and 100 percent for children up to age five in 1988. According to data from the American Academy of Pediatrics,[3] in 1987 there were 171,084 Medicaid recipients under age 21 in Mississippi. Of that number 70,722 of them were under age 6. Child health data obtained from the Division of Medicaid for 1989[4] showed a total of 213,634 children under age 21 on the Medicaid roles. The number of children under age 6 was 99,089, a 40 percent increase. Overall, there was an increase of 42,550 children, 88 percent of the target for Medicaid expansion efforts.

This three-pronged Project also served to advance accessible health care statewide. Simply by informing physicians of the problems and asking that they share occasionally in the acute care of indigent patients and by providing case management by telephone to report concerns and problems of patients and families, accessible health care was advanced in the state. Not only was public and private cooperation enhanced but interagency coordination increased. This public-private venture to increase access to health care was most encouraging and can be easily replicated and expanded.

Access to quality medical care is a complicated issue. Problems relating to the Medicaid eligibility process were quite evident. Many of these problems were addressed through interagency coordination and cooperation. Continued efforts will be needed in this regard as well as efforts to increase physician availability and participation in health programs. As policy makers in our nation's capital debate the need for a national health care program for all Americans, state and local efforts such as this project are highly effective in exposing shortcomings of our health care system. There should be no ethical, clinical or economic rationale to allow barriers to maternal and child health care to continue to exist. Concerned health care providers in Mississippi have the will and have shown a way to promote productive, healthier lives for our youngest citizens and tomorrow's leaders.

Summary

Working under the Mississippi Postneonatal Death Impact Project, the Mississippi Chapter of the American Academy of Pediatrics, in conjunction with the State Department of Health, helped improve access to Pediatric health care in Mississippi. This was accomplished by developing a statewide telephone information and referral service (telephone case management), enlisting primary care physicians to treat a limited number of children without specific compensation and staging a public awareness campaign. System barriers encountered were identified and interagency coordination and cooperation suggested. This effort could be easily replicated and expanded.★★★

800 Carlisle Street (39202)

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Multiple Pterygium Syndrome: Neuromuscular Findings In a Case

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H. BOBO, M.D.
Jackson, Mississippi

A woman with multiple congenital joint deformities and webbing (multiple pterygium syndrome) is described. The electrophysiologic study revealed normal sensory and motor nerve conduction velocities. However, the compound muscle action potential amplitude and the voluntary motor unit size were reduced, suggesting a decrease in the number of muscle fibers. The muscle biopsy was otherwise unremarkable histologically and histochemically. Possible explanations for these findings are discussed.

MULTIPLE PTERYGIUM SYNDROME (MPS)[1-9] is a rare genetic disorder in which children are born with multiple joint contractures and other anomalies. An impressive feature of this condition is the development of symmetric webs (pterygia) across multiple joints and other anatomic regions. Anterior and lateral neck pterygia may be especially prominent, and the neck appears short with a low posterior hairline. The axillae, digits, antecubital and popliteal fossae, and intercrural regions may also have prominent webbings. The digits sometimes exhibit marked camptodactyly and lack flexion creases. Patients can have short stature and a crouching stance. Some distinctive cranial features include hypertelorism, epicanthal folds, antimongoloid slant of the palpebral fissures, ptosis, cleft palate, high-arched palate, micrognathia, posteriorly angulated or low-set ears, and a "sad" facial appearance with down-turned corners of the mouth. Skeletal anomalies frequently include scoliosis, lordosis, abnormal ribs or vertebral bodies, and a vertical talus. Equinovarus or calcaneovalgus positioning defects have also been described. Cryptorchidism or hypoplastic labia majora may be present.

MPS is thought to be inherited in an autosomal recessive manner; considerable intrafamilial variability has been noted. Severely affected, isolated cases have also been described and could represent bias in case diagnosis and reporting. The etiology is unknown, and the diagnosis of this disorder remains a clinical one. This paper describes the electrophysiologic and muscle biopsy findings in an isolated case of MPS.

From the Department of Neurology (Wee), Preventive Medicine and Genetics (Bock) and Neurosurgery (Bobo) University Medical Center, Jackson, MS.

Case Report

A thirty-seven-year-old woman presented herself for evaluation because of increasing left-sided low-back pain of five months duration. The pain was exacerbated by turning of the trunk, prolonged standing, and walking for 20-40 meters. It was relieved by sitting. The posterior aspect of the left leg was also painful, and she experienced numbness in her left hip, lower leg, and fifth toe. Except for occasional throbbing occipital headaches, she did not have any other symptom.

Her medical history revealed the presence of multiple congenital joint contractures and deformities during early life. Surgical releases of popliteal pterygia at the age of five years allowed her to ambulate relatively normally for the first time. She was treated for scoliosis, using a brace between 6 and 12 years of age. She had pneumonia on three occasions and a cholecystectomy. Caesarian section was required for her only pregnancy. Her nineteen-year-old daughter, parents, and five siblings were

all normal. There was no history for consanguinity nor for similarly affected relatives.

Physical examination (See Figure 1) showed a moderately large white woman with a short stature, crouching stance, and kyphoscoliosis. She had downward slanting palpebral fissures, periorbital puffiness, a narrow and highly-arched palate, down-turned corners of the mouth, a short neck with webbing from the chin to the sternum, pterygia colli, and a low posterior hairline. Also present were mild extension deficits at the elbows, decreased supination and pronation of the forearms, and surgical scars from release of popliteal pterygia. Camptodactyly and webbing were prominent features at proximal interphalangeal joints and no flexion creases were seen at distal interphalangeal joints. Distal muscle mass was slightly diminished. Muscle strength was fairly good relative to the restricted range of joint motion. Straight-leg raising test induced pain in the left leg. Moderate sensorineural hearing loss was noted in the left ear. A mild distal sensory deficit was present in the left leg, but not along any specific nerve or root distribution. The physical and neurological examinations were unremarkable otherwise.



Figure 1. Patient with multiple pterygium syndrome. See text for detailed description of physical findings.

The following laboratory tests were normal: complete blood count, blood chemistries and enzymes (including creatine kinase), thyroid function, electrocardiogram, intravenous pyelogram, and skull radiographs. Antinuclear antibodies and serologic test for syphilis were negative. Chest radiographs did not indicate any active cardiopulmonary disease. Spine X-rays revealed marked scoliosis, fusion of C2 and C3, lumbalization of S1, and disc narrowing at L5-S1. Computerized tomographic (CT) scans of the spine with intrathecal contrast material showed bilateral foraminal narrowing at L4-5, pseudoarthrosis in facet joints between L5 and S1, and extradural defect at the lumbosacral junction. Cranial CT scans showed moderate ventricular dilatation and presence of a posterior fossa arachnoid cyst (variant of Dandy-Walker cyst).

Electrophysiologic and Muscle Biopsy Studies

Standard clinical nerve conduction studies were performed on the upper and lower extremities. The sensory and motor nerve conduction velocities and compound sensory nerve action potential amplitudes were normal. Compound muscle action potentials were reduced in amplitude without a corresponding temporal dispersion in the waveform (See Table 1). Late responses (F-waves) were recorded from the thenar and extensor digitorum brevis (EDB) muscles to stimulation of the median and peroneal nerves at the wrist and ankle, respectively; the latencies were within normal (21 and 40 msec). H-reflex latencies were normal bilaterally (23 msec). Repetitive (2/sec) supramaximal nerve stimulation study did not show any decremental response in two muscles that were studied (thenar and EDB), indicating no significant defect in neuromuscular transmission.

Electromyography (EMG) was performed with monopolar needle electrodes in different muscles of the paraspinal regions and upper and lower extremities (first doral interosseous, deltoid, biceps, triceps, EDB, tibialis anterior, medial and lateral gastrocnemius, vastus lateralis, iliopsoas, and gluteus medius). No abnormal insertional or spontaneous activity was noted. The voluntary motor unit potentials (MUPs) were short in duration and low in amplitude. Some muscles tended to show an early recruitment pattern. These findings suggested a diffuse "myopathic" type of abnormality.

The deltoid muscle was biopsied and transverse sections were obtained for slide preparation. The following histological and histochemical stains were utilized in the study: hematoxylin and eosin, trichrome, periodic acid Schiff, phosphorylase, sudan

TABLE I

SENSORY AND MOTOR NERVE CONDUCTION FINDINGS (LEFT EXTREMITIES)

Nerve	*Distal Latency**	*Amplitude**	*Conduction Velocity**
Median (s)	2.6 (<3.4)**	46 (>15)	—
Ulnar (s)	2.5 (<3.0)	32 (>14)	—
Sural (s)	3.7 (<4.4)	6 (>5)	—
Median (m)	2.4 (<3.8)	5.6 (>6; Th)	60 (>52)
Ulnar (m)	2.2 (<3.0)	4.0 (>8; ADM)	55 (>50)
Peroneal (m)	2.8 (<6.0)	0.8 (>3; EDB)	56 (>42)
Posterior tibial (m)	4.4 (<5.6)	2.6 (>8; AH)	49 (>41)

* Distal latencies are in msec, amplitudes in uV (compound sensory nerve action potentials) or mV (compound muscle action potentials), and conduction velocities in m/sec.

** The enclosed items are the corresponding age-matched normal values in our laboratory. s = sensory. m = motor. Th = thenar. ADM = abductor digiti minimi. EDB = extensor digitorum brevis. AH = abductor hallucis.

black, oxidative, and ATPase (pH 9.3). The muscle fibers were normal histologically. No inflammatory cell or increase in connective tissue was observed. Histochemically, the major muscle enzymic activities were present, and there was no abnormal accumulation of substrates. Muscle type grouping was not present.

The ATPase (pH 9.3) muscle slide preparation was enlarged 100 times and photographed. Muscle fibers were counted and analyzed from the photomicrographs according to the technique described by Dubowitz and Brooke.[10] Muscle fiber diameter and variability were normal for both type I and type II fibers, and there was no preponderance of either fiber type (See Figure 2 and Table 2).

Discussion

The patient's primary neurologic problem was compression of the lower lumbar and upper sacral nerve roots with symptoms of intermittent neurogenic claudication which eventually required a laminectomy procedure for relief of pain. During the course of the electrophysiologic studies, however, there was an incidental finding in the EMG which is suggestive of a diffuse myopathic disorder. This prompted a more thorough investigation including a muscle biopsy. However, histological and histochemical analyses of muscle fibers were entirely normal.

The reduction in the size of the maximally evoked compound muscle action potentials (CMAPs) seemed to indicate a decreased number of muscle fibers contributing to the response (See Table 1).

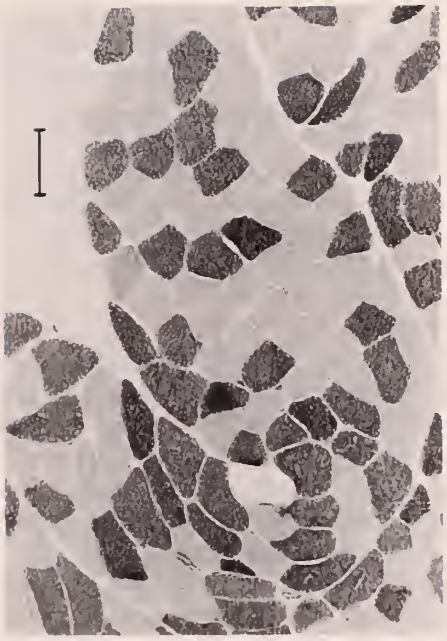


Figure 2. Transverse section of deltoid muscle stained for myofibrillar ATPase activity (pH 9.3). Calibration scale = 100 microns.

TABLE II

MORPHOMETRIC ANALYSIS OF MUSCLE FIBERS (LEFT DELTOID)

Fiber Type	*No.*	*Mean Diameter (microns)*	*S.D.*	*Proportion*
I	109	47	6.6	49%
II	114	53	8.3	51%

The CMAP is obtained through electrical stimulation of a nerve trunk supplying a muscle, and it represents the summation of the individual action potentials produced by the muscle fibers. During needle EMG study, there was also a decrease in the amplitude and duration of the voluntary MUPs which suggested a small motor unit size.

The sensory and motor nerve conduction velocities and compound sensory nerve action potential amplitudes were normal. Based on the electrophysiologic and muscle biopsy findings, there was no evidence of a neurogenic abnormality in this patient.

It is not clear why the number of muscle fibers seemed reduced. There could be a post-developmental destruction and subsequent disappearance of some muscle fibers. However, there was no idication in the muscle biopsy of a fatty or connective tissue replacement to support this explanation unless a sampling error in the choice of biopsy site had occurred. Nevertheless, the electrophysiologic

abormality during EMG was rather diffuse, and the muscle biopsied (deltoid) was of a representative sample. An alternative explanation would be that a certain proportion of muscle fibers may have failed to develop during early life (amyoplasia), accounting for the decreased number. The remaining and surviving muscle fibers could have developed normally. This explanation seems to be more consistent with the relatively unremarkable findings in the muscle biopsy.

In arthrogryposis multiplex congenita, which is a heterogeneous group of disorders characterized by multiple congenital joint deformities, there have been many proposed explanations for the abnormalities. These are largely based on the concept of a disorder of fetal joint movement[11, 12] and include the following: mechanical restriction, increased intrauterine pressure, central nervous system disorders, congenital anterior horn cell disease, congenital polyneuropathy, failure of myoblast formation or migration, congenital muscular dystrophy, disorders of collagen, and intrauterine periarticular inflammatory process.★★★

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Acknowledgment

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Correlation Of Urinary Tract Infection With Urinary Screening At The First Antepartum Visit

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Urinary tract infection contributes to the morbidity of pregnancy since 4-10 percent of antepartum patients have asymptomatic bacteriuria and 20-40 percent of these will result in pyelonephritis. A cost-effective outpatient assessment for asymptomatic bacteriuria in undelivered obstetric patients is described. In this study, 56 patients between 6-24 weeks gestation were assessed over a seven-month period by photometric urinary screening. This assessment was more accurate in identifying those patients with asymptomatic bacteriuria than prior history or symptoms. A 7 percent incidence of asymptomatic bacteriuria was noted with 75 percent being Escherichia coli and the remainder Klebsiella. Single-dose, oral antibiotic therapy was evaluated and resulted in no recurrences. Such screening for asymptomatic bacteriuria was felt to represent preventive and economic medical benefits.

THE SYMPTOMS OF DYSURIA, frequency, and urgency associated with a urinary tract infection are also common complaints of pregnancy. Many of the symptomatic urinary tract infections arise in patients who have had asymptomatic bacteriuria (ASB). While ASB affects 4-10 percent of prenatal clinic populations, purportedly higher rates are found in patients of lower socioeconomic status.[1] An increased incidence is also associated with higher parity, age and medical complications such as diabetes and sickle cell disease.[2]

Statistically, 20-40 percent of gravidas with untreated ASB will develop pyelonephritis, one of the most frequent reasons for hospitalization of a pregnant patient.[3] Treatment of ASB during pregnancy, reduces by greater than 90 percent the incidence of pyelonephritis.[1] This eliminates the serious complications of the disease such as maternal septic shock and premature delivery, as well as reducing the health care economic burden of pyelonephritis.

While the general definition of bacteriuria is the growth of a single organism with a colony count exceeding 100,000 organisms per ml on two consecutive clean-catch voided specimens, many factors complicate the diagnosis of ASB in pregnancy. For instance, contaminating organisms or mixed flora cultures may mask significant pathogens, requiring additional patient visits for diagnosis. Many screening programs fail, particularly in the indigent populations with poor compliance, making eradication of pyelonephritis difficult. Not only are patient return visits a problem but it is often difficult to convince patients with ASB to adhere to a 7–14-day antibiotic course. The prohibitive cost of the medication itself may further compound the problem of patient compliance; however, previous investigations have shown that less-expensive, single-dose therapy is effective in greater than two-thirds of cases occurring during pregnancy.[4]

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The purpose of our study was to identify for an effective ASB screening program in the indigent population and to analyze the benefits of single-dose therapy.

Methods

During a seven-month period, 56 University of Mississippi Medical Center obstetric patients attending the ambulatory clinic at gestational ages of between 6-24 weeks were assessed for ASB. Those patients excluded had symptomatic for urinary tract infection or had taken antibiotics within the past three weeks. Those included in the study completed a screening questionnaire which collected information about previous history of cystitis, pyelonephritis, nephrolithiasis, sickle cell disease or trait, and diabetes.

The urine specimens were obtained during the pelvic exam with the patient in the lithotomy position by catheterization with a Female Quick Cath® device (Medtronics, Berkley, CA), after preparation of the external urethral meatus with two Povidine iodine swabs. Each specimen was then sent to the Medical Center bacteriologic laboratory for a urinary screen. The urinary screen was employed as a rapid detection system in which negative specimens could be eliminated from further laboratory evaluation. The ABBOT MS-2 urine screen, which is less expensive than the primary plate culture method, uses photometry for rapid detection of bacteriuria. A urine specimen is identified as positive when a specific change in light transmission indicates microbial growth.

The positive specimens were then plated for identification and sensitivities in the standard fashion. Specimens not meeting the criteria for positive growth within five hours were designated as negative. Those patients with positive urine culture were contacted to return for single-dose therapy according to the microbial sensitivities. Where indicated, 3 gm of ampicillin or 2 gm cephalosporin were given orally for treatment. Those patients with positive cultures were then assessed on a monthly basis to determine relapse or reinfection rates from therapy.

Results

Our results involving 56 obstetric outpatients screened from 6-24 weeks gestation are shown on Table 1. Four of the 56 were cultured positive, yielding a 7 percent incidence of ASB in our antenatal clinic population. Of the positive cultures (Table 2), 75 percent of the organisms cultured were identified as E. coli. All of the E. coli organisms cultured were sensitive to ampicillin and those patients were treated with 3 gm of ampicillin orally as a single-dose therapy. One culture was positive for Klebsiella, was sensitive to cephalosporin, and was treated with 2 gm orally of that medication.

TABLE 1

ASYMPTOMATIC BACTERIURIA (ASB) SCREENING

Obstetric Patients at 6-24 weeks Gestation	56
ASB Culture Positive	4
ASB Rate	7%

TABLE 2

ASB MICROORGANISMS CULTURED

	# of Cases	*Percentage Occurrence*
E. coli	3	75%
Kleibisella pneumonia	1	25%

Forty-four percent of the screened population responded affirmatively to a past history of a urinary tract infection. Only two of the four positive-culture ASB patients were within this group, whereas the other two subjects with ASB had no prior history of urinary tract infection. Thirteen of the 22 multigravidas with a past history of urinary tract infection had had symptomatic urinary tract infections in previous pregnancies, but only one patient had ASB during this gestation. Of the four patients with previous hospitalizations for pyelonephritis one had ASB. Four patients had diabetes and one envinced ASB. Two of the 35 black patients had sickle hemoglobinopathy and neither had ASB.

Forty of the 56 patients returned for continued evaluation. Follow-up cultures were obtained in all patients with ASB and they were negative after treatment. There were no recurrences of cystitis or pyelonephritis in the follow-up group of those with negative screening assessment for ASB.

Discussion

Seven percent of this prenatal population had ASB, a percentage similar to other studies.[1,3] A majority of the isolated microorganisms were E. coli which correlates with previous reports.[5]

While this study demonstrates that patients with a past history of pyelonephritis or diabetes constituted a higher risk group for ASB, at least 50 percent of patients with ASB had no prior history of urinary tract infection. Therefore, historic data does not of-

fer an effective screening method. Only by assessing all patients to document the presence of bacteriuria will those patients with ASB be identified. The urinary screening method is more cost-effective than the primary plate culture method in providing a savings of $14 per patient. The Female Quick Cath® procedure for specimen collection allowed for an uncontaminated specimen with minimal patient discomfort. The risk of introduction of bacteria into the bladder by this device was not demonstrated as no cases of cystitis or pyelonephritis was attributed to the introduction of bacteria by the catheterization. This is probably reflective of a careful urethral meatus preparation, and sterile technique.

The single-dose therapy treatment of ASB seemed effective in our study population. The fact that negative urine cultures were obtained from the patients after single-dose therapy can be compared to previous studies showing a 69 percent cure rate with single-dose therapy in pregnancy.[4] In populations where poor compliance to prescribed medications is a problem, the single-dose therapy holds potential benefits for eradicating bacteriuria. It must be emphasized however that subsequent cultures to document eradication of ASB are required if such therapeutic regimen is used.★★★

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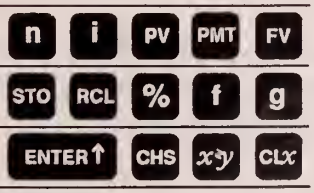
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SPECIAL ARTICLE

"ADOPTED STANDARDS FOR THE REGULATION OF MEDICAL WASTE" IN HEALTH CARE FACILITIES LICENSED BY THE MISSISSIPPI STATE DEPARTMENT OF HEALTH

REGULATED MEDICAL WASTE

"Infectious medical wastes" includes solid or liquid wastes which may contain pathogens with sufficient virulence and quantity such that exposure to the waste by a susceptible host has been proven to result in an infectious disease. For purposes of this Regulation, the following wastes shall be considered to be infectious medical wastes:

(1) Wastes resulting from the care of patients and animals who have Class I and (or) II diseases that are transmitted by blood and body fluid as defined in the rules and regulations governing reportable diseases. (See attached) as defined by the Mississippi State Department of Health;

(2) Cultures and stocks of infectious agents; including specimen cultures collected from medical and pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate, and mix cultures;

(3) Blood and blood products such as serum, plasma, and other blood components;

(4) Pathological wastes, such as tissues, organs, body parts, and body fluids that are removed during surgery and autopsy;

(5) Contaminated carcasses, body parts, and bedding of animals that were exposed to pathogens in medial research;

(6) All discarded sharps (e.g., hypodermic needles, syringes, Pasteur pipettes, broken glass, scalpel blades) which have come into contact with infectious agents;

(7) Other wastes determined infectious by the generator or so classified by the State Department of Health.

"Medical Waste" means all waste generated in direct patient care or in diagnostic or research areas that is non-infectious but aesthetically repugnant if found in the environment."

Medical Waste Management Plan

All generators of infectious medical waste and medical waste shall have a medical waste management plan that shall include, but is not limited to, the following:

I. Storage and Containment of Infectious Medical Waste and Medical Waste
   A. Containment of infectious medical waste and medical waste shall be in a manner and location which affords protection from animals, rain and wind, does not provide a breeding place or a food source for insects and rodents, and minimizes exposure to the public.
   B. Infectious medical waste shall be segregated from other waste at the point of origin in the producing facility.

C. Unless approved by the Mississippi State Department of Health or treated and rendered non-infectious, infectious medical waste (except for sharps in approved containers) shall not be stored at a waste producing facility for more than seven days above a temperature of 6 C (38F). Containment of infectious medical waste at the producing facility is permitted at or below a temperature of 0 C (32F) for a period of not more than 90 days without specific approval of the Department of Health.

D. Containment of infectious medical waste shall be separate from other wastes. Enclosures or containers used for containment of infectious medical waste shall be so *secured* so as to *discourage access* by unauthorized persons and shall be marked with prominent *warning signs* on, or adjacent to, the exterior of entry *doors, gates*, or *lids*. Each container shall be prominently labeled with a sign using language to be determined by the Department and legible during daylight hours.

E. Infectious medical waste, except for sharps capable of puncturing or cutting, shall be contained in double disposable plastic bags or single bags (1.5 mills thick) which are impervious to moisture and have a strength sufficient to preclude ripping, tearing, or bursting under normal conditions of usage. The bags shall be securely tied so as to prevent leakage or expulsion of solid or liquid wasted during storage, handling or transport.

F. All sharps shall be contained for disposal in leakproof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of the contents.

G. All bags used for containment and disposal of *infectious medical waste* shall be of a distinctive color or display the Universal Symbol for infectious waste. Rigid containers of all sharps waste shall be labeled.

H. Compactors or grinders shall not be used to process infectious medical waste unless the waste has been rendered non-infectious. Sharps containers shall not be subject to compaction by any compacting device except in the institution itself and shall not be placed for storage or transport in a portable or mobile trash compactor.

I. Infectious medical waste and medical waste contained in disposable containers as prescribed above, shall be placed for storage, handling, or transport in disposable or reusable pails, cartons, drums, or portable bins. The containment system shall be leakproof, have tight-fitting covers and be kept clean and in good repair.

J. Reusable containers for infectious medical waste and medical waste shall be thoroughly washed and decontaminated each time they are emptied by a method specified by the Mississippi State Department of Health, unless the surfaces of the containers have been protected from contamination by disposable liners, bags, or other devices removed with the waste, as outlined in I. E.
Approved methods of decontamination include, but are not limited to, agitation to remove visible soil combined with one or more of the following procedures:
   1. Exposure to hot water at leasts 180 F for a minimum of 15 seconds.
   2. Exposure to a chemical sanitizer by rinsing with or immersion in one of the following for a minimum of 3 minutes
      a. Hypochlorite solution (500 ppm available chlorine).
      b. Phenolic solution (500 ppm active agent).
      c. Iodoform solution (100 ppm available iodine).
      d. Quaternary ammonium solution (400 ppm active agent).
      Reusable pails, drums, or bins used for containment of infectious waste shall not be used for containment of waste to be disposed of as non-infectious waste or for other purposes except after being decontaminated by procedures as described in part (J) of this section.

K. Trash chutes shall not be used to transfer infectious medical waste.

L. Once treated and rendered non-infectious, previously defined infectious medical waste will be classified as medical waste and may be landfilled in an approved landfill.

II. Treatment or disposal of infectious medical waste shall be by one of the following methods:

A. By incineration in an approved incinerator which provides combustion of the waste to carbonized or mineralized ash.

B. By sterilization by heating in a steam sterilizer, so as to render the waste non-infectious. Infectious medical waste so rendered non-infectious shall be disposable as medical waste. Operating procedures for steam sterilizers shall include, but not be limited to, the following:

1. Adoption of standard written operating procedures for each steam sterilizer including time, temperature, pressure, type of waste, type of containers(s), closure on container(s), pattern of loading, water content, and maximum load quantity.
2. Check or recording and/or indicating thermometers during each complete cycle to ensure the attainment of a temperature of 121 C (250 F) for one-half hour or longer, depending on quantity and density of the load, in order to achieve sterilization of the entire load. Thermometers shall be checked for calibration at least annually.
3. Use of heat sensitive tape or other device for each container that is processed to indicate the attainment of adequate sterilization conditions.
4. Use of the biological indicator *Bacillus stearothermophilus* placed at the center of a load processed under standard operating conditions at least monthly to confirm the attainment of adequate sterilization conditions.
5. Maintenance of records of procedures specified in (1), (2), (3) and (4) above for period of not less than a year.

C. By discharge to the approved sewerage system if the waste is liquid or semi-liquid, except as prohibited by the State Department of Health.

D. Recognizable human anatomical remains shall be disposed of by incineration or internment, unless burial at an approved landfill is specifically authorized by the Mississippi State Department of Health.

E. Chemical sterilization shall use only those chemical sterilants recognized by the U. S. Environmental Protection Agency, Office of Pesticides and Toxic Substances. Ethylene oxide, glutaraldehyde, and hydrogen peroxide are examples of sterilants that, used in accordance with manufacturer recommendation, will render infectious waste non-infectious. Testing with *Bacillus subtilis* spores or other equivalent organisms shall be conducted quarterly to ensure the sterilization effectiveness of gas or steam treatment.

III. Treatment and disposal of medical waste which is not infectious shall be by one of the following methods:

A. By incineration in an approved incinerator which provides combustion of the waste to carbonized or mineralized ash.

B. By sanitary landfill, in an approved landfill which shall mean a disposal facility or part of a facility where medical waste is placed in or on land, and which is not a treatment facility.

Reportable Diseases
(Mississippi Code of 1972 as Amended)

All reports made shall include, unless otherwise specified, the patient's name, address, age, race, sex, the disease or condition, the date of onset of the disease, and the person or institution reporting.

Class 1 Diseases —
Telephone report ASAP (Days 960-7725), (After hours 960-7400)

Anthraz in Man
Botulism
Cholera
Dengue
Diphtheria
*Encephalitis
*Foodborne Outbreaks
*Hepatitis A
*Measles
*Meningitis or other Invasive disease due to:
Neisseria meningitidis
Hemophilus influenzae
Plague
Poliomyelitis
Psittacosis
Rabies:
In Man
In Animals
*Syphilis
Trichinosis
*Tuberculosis (active)
Typhoid Fever
Yellow Fever
*Any Suspected Outbreak

Class 2 Diseases —
Report within one week by telephone (960-7725) or mail.

*Acquired Immunodeficiency Syndrome (AIDS)
Actinomycosis
Amebiasis
Ascariasis
Blastomycosis
Brucellosis
Coccidioidomycosis
Cryptococcosis
*Giardiasis
*Gonorrhea
Guillian-Barré Syndrome
*Hepatitis B
Hepatitis non-A, non-B
Hepatitis, unspecified
Histoplasmosis
*HIV Infection
Hookworm
Hydatidosis
*Influenza (weekly case count)
Leprosy
Leptospirosis
Malaria
Meningitis other than: Meningococcal or *H. Influenzae*
*Mumps
Pertussis
Poisoning
Q. Fever
Relapsing Fever
Reye's Syndrome
*Rheumatic Fever (acute)
*Rocky Mountain Spotted Fever
*Salmonellosis
*Shigellosis
Taeniasis
Tetanus
Toxoplasmosis
Tularemia
Typhus Fever

* are more common.

The Office of Epidemiology (960-7725) is available for consultation regarding any aspect of reportable diseases. For after hours, night and weekend assistance or for emergency case reports, call 960-7400, 24 hours a day, 365 days a year. In addition to keeping basic surveillance statistics, the Mississippi State Department of Health provides post exposure prophylaxis and tracing of high risk case contacts for Hepatitis A, meningococcal diseases, and invasive disease due to *Hemophilus influenzae*, treats new cases of TB and STDs based on contact tracing, and investigates outbreaks.

Sample Medical Waste Management Plan

I. The following items generated in my office fall under Medical Waste regulated by the Mississippi State Department of Health.
   A. **Blood and blood products**
   B. **Cultures**, etc.
   C. **Sharps**

II. All of the above regulated waste will be separated from non-regulated waste in the following manner:
   A. **Blood, blood products and cultures,** etc. will be bagged in double disposable plastic bags or single bags (1.5 mills thick) which are impervious to moisture and have a strength sufficient to preclude ripping, tearing, or bursting under normal conditions of usage. The bag will be securely tied so as to prevent leakage or expulsion of solid or liquid waste during storage or handling. These bags will be of distinctive color or display the universal symbol for infectious wastes.
   B. **Sharps** will be contained in leak-proof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of contents.

III. The regulated medical waste will be treated and/or disposed of in the following manner:
   "The waste will be picked up by _____ on a regular basis."
   (waste management firm)

   or

   "The waste will be taken to _____ for incineration."
   (name of local hospital)

   or

   "The waste will be autoclaved in my office and transported to the local county landfill."

   or

   "The waste will be disinfected by use of phenolic, hypochlorite or other solution of sufficient strength to render the waste non-infectious and will be transported to the local county landfill."

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THE PRESIDENT'S PAGE

J. ELMER NIX, M.D.

Medicare Fee Schedule

In 1777 in Pennsylvania, where the main force of Washington's Army was quartered, the legislature decided to try a period of price control on those commodities needed by the Army. The idea was to reduce the expense of supplying the Army. Subsequently, the price of the uncontrolled goods rose to record heights. Most farmers held back their produce, refusing to sell at those "unfair" and low prices. Some even secretly sold these "price controlled" commodities to the British enemy. After that disastrous winter at Valley Forge, Washington's Army nearly starved to death. The Continental Congress on 4 June 1778 adopted the following resolution:

"Whereas, it has been found by experience that limitations upon the prices of commodities are not only ineffectual for the purposes proposed, but are productive of very evil consequences, to the great detriment of the public service, therefore be it resolved, that it be recommended to the states to repeal or suspend all laws or resolutions limiting, regulating, or restraining, the price of any article, manufacture or commodity."

For two centuries, price controls have not worked in the United States. When dealing with today's health care problems, price controls are probably not going to work. The cost of medical care is expensive — so is the cost of higher education and many other vital services. The cost of health care is a problem in our nation today and we must find a solution that is rational and effective. Price controls on physician reimbursement (a la Medicare) is a legislative and not a logical solution. Just like the price controls in 1777 it will not be effective and will lead to evil consequences — miscoding, upcoding, unbundling, over utilization of services, and yes, most probably to some unnecessary medical and surgical procedures.

Some doctors today are declining to treat Medicare patients, some doctors are moving their practices because of the high percentage of Medicare patients in their area. Some are refusing to accept new patients with Medicare. These elderly people are generally sicker and require much more attention and much more doctor time than younger patients — and Medicare payments are significantly lower than usual and customary charges to private patients. When faced with a

(Continued on page 341)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION
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OCTOBER 1990

CME Programs Valuable Asset

The network of continuing medical education programs offered today constitutes a vital part of post-graduate medical education in this country. Organized medicine, Boards of Medical Licensure and others now rely on these programs to offer, document and verify physicians participation in the program, and in some instances require such participation. To meet the demands of continuing medical education, a large variety of programs are being offered by medical societies, specialty groups, hospital staffs, medical schools, commercial vendors and private organizations. Although one would think such programs of professional enrichment would be utilized to their fullest for the purpose of improving one's professional abilities, this is not always the case. For several years, there have been some glaring abuses of the CME program with education relegated to a minor part of some programs. While the majority of programs appear to be properly developed, professionally presented and appropriate attendance standards maintained, enough programs fall short of the accepted standards to cause concern about the validity of credits earned, and even the goals of some presentations. Such abuses are to be reviewed by the Senate Committee on Labor and Human Relations which plan fall hearings on CME abuses. I anticipate these will rapidly expand to cover all aspects of CME. Not only are secondary groups demanding CME by physicians, they now want to be assured these programs fulfill the objectives of appropriate post-graduate study and that the programs can be relied upon to achieve these goals.

Mississippi physicians are strongly urged to evaluate CME programs to assure they offer the opportunity for improving one's professional qualifications. Such an approach will greatly benefit both the physicians and their patients.

MYROW W. LOCKEY, M.D.
Editor

President's Page

(Continued from 340)

choice, as to which patient to choose to see between two, are you going to turn down the 35 year old who pays your usual and customary fee or the Medicare patient who requires more time and pays less for the service? For many of us, Medicare does not even cover our overhead — too many Medicare patients equates with bankruptcy under those conditions. Price controls don't work.

In pre-Medicare days, doctors took care of indigent patients, based on their conscience, the hospital requirements for service, and their own tradition of public service. In those days patients were relatively ignorant of medical matters, less open about their intimate lives, more stoic and more willing to accept authority. Most doctors entered private practice, carried a little black bag, made house calls and saw all patients themselves — even those in the Emergency Rooms. Most doctors accepted cash payment or payment in kind such as a large sack of tomatoes, a bushel of corn or three chickens. We also often received a sincere "Thank you, Doctor" for services rendered. Things have changed so much today.

Doctors are probably more competent and less negligent than they were 25 years ago. However, we have lost some of that "personal touch" of years ago. We have lost some of that personal contact with patients, as we have become more scientific. Medicine, like it or not, has been partially converted to a business.

It has been said that the main goal in the business world is to transfer money from someone else's pocket to your own pocket. As we see medicine being converted, by external forces, to a business, we realize a major change has come about. We don't get those sacks of tomatoes or those sincere "Thank yous" as often as we did before. We earlier believed we were highly regarded by society and we believed we were exercising professional and economic re-

sponsibility in our calling. But today, we see ourselves being cast as wrong doers and incompetents who regularly require new laws, regulations, court decisions and admonitions, to make us more honest, ethical, and competent. Just consider for one moment, it is the politicians who are portraying us in this manner. As we see our profession being converted to a business, against our wishes, we perhaps want to see more money transferred to our pockets. We have lost some prerequisites — and now we think we should balance the scales with a commensurate reimbursement adjustment.

Well, the reimbursement adjustment is coming. Watch for it in 1992 when the Medicare Fee Schedule is to be implemented. Right now Washington tells us that in Mississippi we will see a 25% increase in Medicare-Allowed Charges — a higher increase than any other state (because we are now, and have been, so far below others). One bit of advice — don't spend that extra 25% until you get it in your hand.

LETTERS

To The Editors:

Occasionally, a patient with a severe movement disorder will fall and injure themselves. It has always been difficult to suture these lacerations because of the constant movement of the patient. Specifically, I have a patient with Chorea-acanthocytosis in a very advanced state, who has almost constant movements of the head and neck and becomes very uncomfortable and almost panics if she is restrained. Recently, she hit her head against the door hinge and lacerated her forehead just above her left eyebrow. The laceration was full thickness laceration of the scalp, approximately 2.5 centimeters in length. The edges were clean and smooth. There was a considerable amount of bleeding at the time of the laceration. Faced with the difficulty of placing small sutures in this patient, the laceration was cleaned with appropriate cleansing. The surrounding area was bathed off with 70 percent Isopropyl alcohol and the laceration was closed with super glue. Two edges of the laceration were approximated and a bead of super glue was run down the center of the laceration on the surface of the skin as the two edges were held. Additional super glue was then placed around the perimeter overlapping the center of the laceration. This provided an airtight, watertight bandage that has allowed for excellent healing without significant scarring.

This is the second laceration of this type, on the scalp, that I have closed using super glue.

I would propose super glue as a successful alternative to suturing, particularly in patients with movement disorders in which the placement of the sutures would either be extremely traumatic or the restraining of the patient would produce a significant psychological trauma.

An additional benefit of the utilization of the super glue to close a laceration, is the fact that the super glue begins to lose its adhesiveness and to slough off from the surface of the skin at about the fifth to sixth day after the application. This is caused by several factors, the loss of some of the adhesiveness in the super glue, but also, obviously, the epithelial cells beginning to slough. This fortunately corresponds with the optimal time for the closure of a scalp or facial laceration so that there is no artificial removal process necessary. Since this is a natural process and is absolutely painless to the patient, the added trauma, particularly in the case of my type of patient, in trying to remove small sutures is also avoided.

Further investigation of this matter is being undertaken at this time.

Thank you and sincerely yours,

George Wilkerson, M.D.
Hattiesburg, Mississippi



The MSMA Auxiliary held a very successful workshop August 28, 1990 at River Oaks Hospital in Jackson. Plans were made to continue the Auxiliary's current focus on teen health. Ways of increasing membership and support of AMA-ERF were also discussed. Seven area workshops were scheduled in October and November for auxiliary members concerning key issues for the 1991 Mississippi Legislative Session.

UMC Announces Faculty Appointments

Five have been named in appointments to the faculty of the Schools of Medicine and Nursing and centerwide at the University of Mississippi Medical Center.

In the School of Medicine, Dr. Samual G. Agnew was named assistant professor of orthopedic surgery; Dr. Stephanie L. Elkins was appointed instructor in medicine; and Maude A. Wright was named assistant professor of psychiatry and human behavior.

Dr. Virginia Lee Cora was named associate professor of nursing and Dr. Sharon A. Lobert, assistant professor of nursing in the School of Nursing.

Dr. Agnew earned the MD in 1984 at Tulane University. He took his internship in surgery at Tulane University affiliated hospitals and a residency in orthopedic surgery at the Medical University of South Carolina. He took a trauma fellowship at the University of Washington School of Medicine Harborview Medical Center in Seattle, Wash. before coming to the Medical Center.

Dr. Elkins earned the MD in 1987 at the University of Mississippi Medical Center. She took her internship and residency at the Medical Center.

Dr. Wright earned the MD in 1979 at Tufts University School of Medicine. She took her internship in pediatrics at Boston City Hospital in Boston, Mass., and a residency in psychiatry and fellowship in child psychiatry at the Los Angeles County/University of Southern California. She has been a psychiatrist with the Mississippi State Hospital at Whitfield and in private practice in child and adolescent psychiatry since 1983. She is co-founder of Communities Interested in Today's Youth, CITY, Inc., a clinic for underprivileged youth which provides mental health, educational and recreational services and has been associate director since 1986. She is on the medical staff of the Southwest Regional Mental Heath Center in McComb and Charter Hospital in Jackson.

Dr. Cora earned the BSN in 1961 and the MSN in 1972 at the University of Mississippi Medical Center, the DSN in 1985 at the University of Alabama at Birmingham, and the MSN in 1988 at the Mississippi University for Women. She was assistant professor of nursing at Mississippi College School of Nursing from 1972-1983, and has been on the nursing staffs at St. Dominic-Jackson Memorial Hospital, Mississippi State Hospital, Mississippi Methodist Rehabilitation Center, Mississippi Center for Nursing, Central Mississippi Home Health Agency, Hinds General Hospital and Naples Community Hospital in Naples, Fla. She also was director of accreditation and licensure at the Mississippi State Department of Health from 1985-1987. She had been associate professor of nursing at the Mississippi University for Women and an adult/geriatric nurse practitioner with Hinds Internal Medicine Clinic and Pleasant Hills Nursing Home since 1988.

Dr. Lobert earned the BA in 1972 at the University of Michigan, the MSN in 1979 and the PhD in molecular biology in 1989 at Vanderbilt University. She has been on the nursing staff at the Veterans Administration Hospital and St. Thomas Hospital in Nashville and Capitol Hill Hospital in Washington, D.C., and was an infirmary supervisor with the Tennessee Preparatory School in Nashville. She was instructor in nursing at the Tennessee Technological University at Cooksville from 1982-1984

and had been assistant professor of nursing at Capstone College of Nursing at Tuscaloosa, Ala., since 1989.

Twenty have been named in faculty appointments in the Schools of Medicine, Nursing, Health Related Professions and Dentistry and centerwide at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

School of Medicine appointments included Dr. Robert A. McGuire, Jr., associate professor of orthopedic surgery; Dr. Lon F. Alexander, assistant professor of neurosurgery; Dr. Nancy J. Dorman, assistant professor of medicine; Dr. Thomas C. Edwards, assistant professor of pediatrics Dr. Terrance J. Hall, assistant professor of surgery; Dr. Farid F. Muakkassa, assistant professor of surgery and assistant professor of anesthesiology, Dr. Peter Wilton, assistant professor of surgery; Dr. Andree A Dadrat, instructor in medicine; Dr. Stephanie L. Elkins, instructor in medicine; Dr. Thomas G. Gates, instructor in radiology; and Dr. Melanie W. Wright, instructor in medicine.

Appointments in the School of Nursing included Dr. Barbara P. Rogers, professor of nursing; Susan D. Hart, assistant professor of nursing; and Patricia Waltman, assistant professor of nursing.

Dr. David G. Fowler was named associate professor of medical technology and acting chairman of the department in the School of Health Related Professions.

Dr. Roger B. Johnson was named associate professor of periodontics in the School of Dentistry.

Centerwide, Dr. Gregory A. Mihailoff was named associate professor of anatomy; Dr. Terrence P. Ma, assistant professor of anatomy, Dr. Jane F. Reckelhoff, assistant professor of physiology and biophysics; and Dr. Allen R. Sinning, assistant professor of anatomy.

Dr. McGuire earned the MD in 1979 at the University of Alabama. He took his internship in surgery and residency in orthopedic surgery at the Naval Hospital at Portsmouth, Va., and fellowships in spinal cord injury and adult spine surgery at the University of Miami and in pediatric reconstruction and scoliosis at Miami Children's Hospital. He had been an assistant professor of orthopedics at Eastern Virginia Medical School in Norfolk since 1986.

Dr. Alexander earned the MD in 1984 at Louisiana State University. He took his internship and residency at the University of Mississippi Medical Center, where he had been chief resident in neurosurgery since 1984.

Dr. Dorman earned the PhD in 1980 and the MD in 1983 at Ohio State University. She took her internship at Northeastern Ohio Universities College of Medicine affiliated Hospitals and residency in internal medicine at Wayne State University Hospitals. She had been a fellow in infectious diseases at Wayne State University since 1987.

Dr. Edwards earned the MD in 1984 at the University of Missouri. He took his residency in pediatrics at the University of Tennessee at Memphis, LeBonheur Children's Medical Center. He had been a fellow in pediatric cardiology at the University of Minnesota since 1987.

Dr. Hall earned the PhD in 1977 and the MD in 1983 at the University of Illinois. He took his residency in general surgery at the University of Illinois and Cook County Hospitals and had been a fellow in surgical oncology at the City of Hope National Medical Center in Duarte, Calif., since 1988.

Dr. Muakkassa earned the MD in 1983 at the American University of Beirut. He took his residency in general surgery at St. Francis Medical Center and the UMDNJ Robert Wood Johnson Medical School at Trenton, N.J., followed by a fellowship in critical care and trauma at the University of North Carolina at Chapel Hill. He had been a fellow in surgical intensive care at the University of Mississippi Medical Center since 1989.

Dr. Wilton earned the MBBCh in 1980 at the University of Witwatersrand in Johannesburg, South Africa. He took his internship in internal medicine and general surgery at the University of Witwatersrand, followed by a residency in general surgery at the University of Minnesota. He has been a fellow in academic surgery at the University of Mississippi Medical Center since 1989.

Dr. Dadrat earned the MD in 1988 at the University of Hannover, West Germany. He took his internship at St. Laurence's Hospital in Dublin, Ireland, and residencies in internal and emergency medicine at Ealing General Hospital in London, England, and in internal medicine at the William Harvey Hospital in England. He has been chief resident in medicine at the University of Mississippi Medical Center since July, 1990.

Dr. Elkins earned the MD in 1987 at the University of Mississippi Medical Center, where she took her internship and residency.

Dr. Gates earned the MD in 1986 at Louisiana State University. He took his residency in diagnostic radiology at the University of Mississippi Medical Center and has been a fellow in interventional radiology at the Medical Center since July, 1990.

Dr. Wright earned the MD in 1987 at the University of Mississippi Medical Center, where she took her internship and residency in internal medicine. She has been a staff physician at the Department of Veterans Affairs Medical Center since July, 1990.

Dr. Rogers earned the PhD in 1981 at the University of Arizona. She had been associate professor of medical-surgical nursing at Montana State University College of Nursing since 1980.

Ms. Hart earned the MS in 1983 at the University of Southern Mississippi. She had been a instructor in nursing at the University of Southern Mississippi since 1987.

Ms. Waltman earned the MSN in 1975 at the University of Mississippi Medical Center. She had been an instructor in nursing at Hinds Community College since 1982.

Dr. Johnson earned the DDS in 1972 at the University of Tennessee and the PhD in 1981 at the University of North Dakota. He had been a member of the faculty at the University of Manitoba at Winnipeg, Manitoba, Canada since 1981, and as professor of preventive dental science and associate professor of anatomy since 1986.

Dr. Fowler earned the PhD in 1990 at Texas Tech University. He had been a clinical scientist in the flow cytometry laboratory since 1986 and associate professor of clinical laboratory science and director of academic information systems at the Texas Tech University Health Sciences Center School of Allied Health since 1987. He also has been in private business in Lubbock, Tex. since 1986.

Dr. Mihailoff earned the PhD in 1974 at Ohio State University. He has been associate professor of neurology at the University of Texas Southwestern Medical Center at Dallas since 1984 and a member of the faculty in the department of Cell Biology and Neuroscience since 1974.

Dr. Reckelhoff earned the PhD in 1985 at the Medical College of Virginia Commonwealth University. She took her postdoctoral fellowship in physiology at the University of Texas Health Science Center. She has been a fellow in physiology at West Virginia University since 1987 and a National Institute of Health endocrine fellow since 1989.

Dr. Sinning earned the PhD in 1985 at the University of North Dakota. He was a Hamre Fellow in anatomy at the University of North Carolina and took postdoctoral fellowship training with the American Heart Association. He had been a fellow in anatomy and cellular biology at the Medical College of Wisconsin since 1985.

Medico-Legal Brief

Hospital Acted Properly In Revoking Privileges

The Mississippi Supreme Court upheld a chancery court finding that Garden Park Community Hospital in Gulfport acted properly in revoking staff privileges for Dr. Sidney Wong.

Harrison County Chancellor Jason H. Floyd Jr. ruled in 1987 that Garden Park acted properly within its bylaws when it revoked privileges for Wong, who was a staff physician at the hospital from 1979 to 1984. The hospital's executive committee voted in 1984 to suspend Wong's medical privileges pending a complete physical and psychological examination.

The committee had heard complaints about Wong's conduct at the hospital. Wong appealed for a hearing by a judicial review committee, which in 1985 terminated Wong's staff privileges. That decision was upheld by a hospital appellate review board and later by the chancery court.

Sullivan, in Wong's appeal, said the Supreme Court was limited by law to reviewing only whether the hospital complied with its own due process procedures. He said the court could not address Wong's arguments about the allegations or other issues in the appeal.

Sullivan said state law gives hospitals sole authority to control and regulate staff and makes no distinction between public and private hospitals.

The justice said state law provides that a hospital's decision to revoke or limit a doctor's privileges is not subject to judicial review unless the hospital did not follow its own due process procedures as spelled out in its bylaws.



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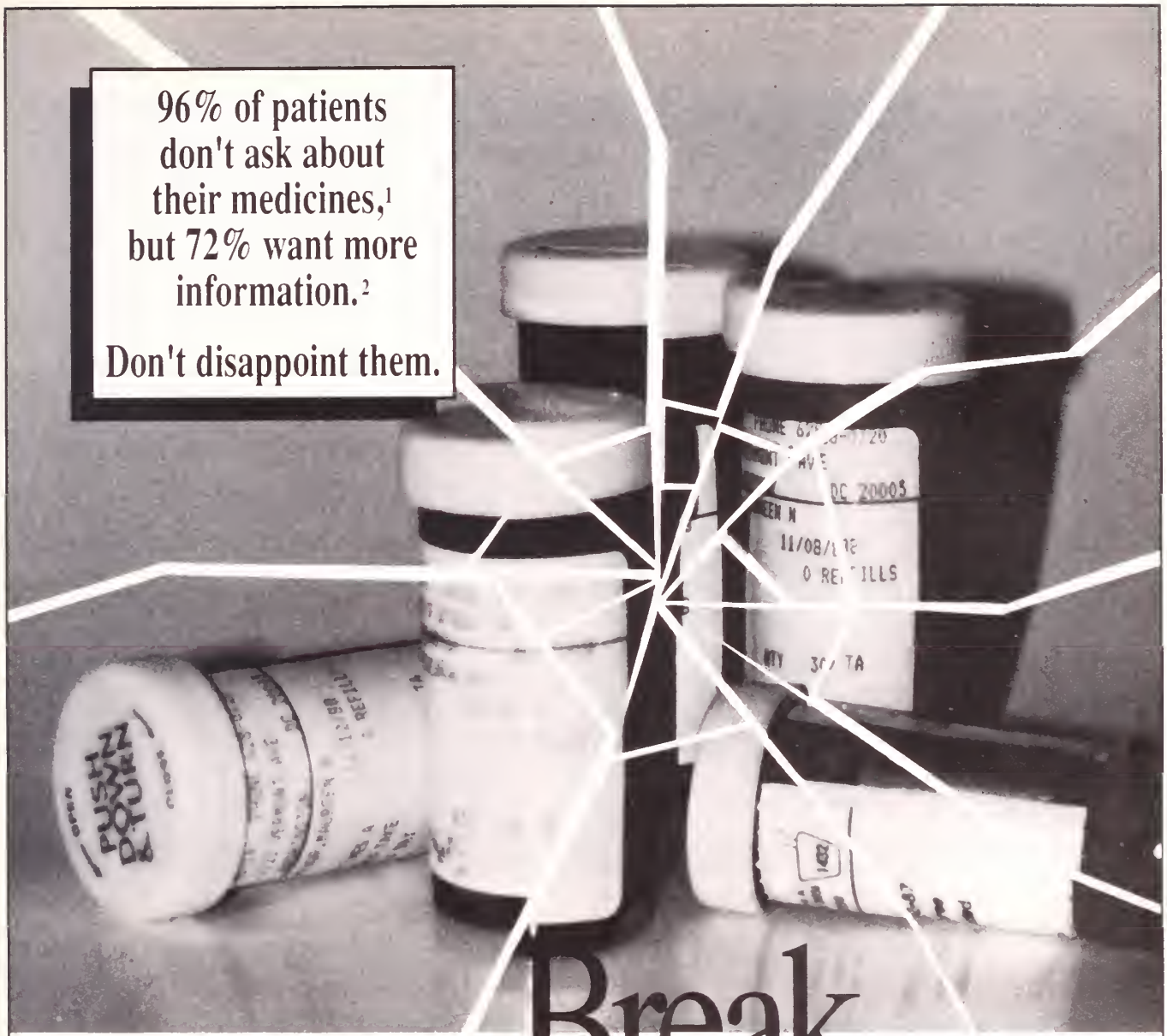
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[1] FDA survey, "Patient Receipt of Rx Drug Information", 1983

[2] A Study of Attitudes, Concerns, and Information Needs for Rx Drugs and Related Illnesses, CBS Television Network Consumer Model Survey, 1983

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Standing: (Left to right) Joe S. Covington, M.D., director, internist, Meridian; William A. Whitehead, M.D., director, general surgeon, Hattiesburg; James M. Cooper, M.D., director, anesthesiologist, Tupelo; Ralph L. Brock, M.D., director, family practitioner, McComb; Max L. Pharr, M.D., director, family practitioner, Jackson; John F. Lucas, Jr., M.D., director, general surgeon, Greenwood.

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NEW MEMBERS

Johns, Michael Jay, Corinth. Born Dayton, Ohio, March 10, 1950; M.D., University of Oklahoma College of Medicine, Oklahoma City, OK. 1979; interned and surgery residency, University of Oklahoma, Tulsa, OK, 1979-1984; elected by Northeast Mississippi Medical Society.

McHenry, David Glen, Meridian. Born Fort Walton Beach, FL, December 22, 1953; M.D., University of Mississippi School of Medicine, Jackson, MS, 1986; interned and neurology residency, Same, 1986-90; elected by Central Medical Society.

Mims, Leroy Cecil, Meridian. Born Florence, South Carolina, May 3, 1932; M.D., Medical College of Georgia School of Medicine, Augusta, GA, 1957; interned one year Greenville General Hospital, Greenville, South Carolina; pediatric residency Medical College of Georgia, Augusta, GA, 1958-60; neonatology fellowship, 1968-69, University of Oklahoma Health Science Center, Oklahoma City, OK; neonatology fellowship, St. Jude's Children Hospital, Memphis, TN, 1969-70; elected by East Mississippi Medical Society.

Perkins, Phillip Kerry, Jackson. Born Jackson, MS, July 4, 1961; M.D., University of Mississippi School of Medicine, Jackson, MS, 1987; interned and emergency medicine residency, Pitt County Memorial Hospital, Greenville, North Carolina 1987-90; elected by Central Medical Society.

Scott, Aubrey Leroy, Jr., Meridian. Born Vicksburg, MS., August 2, 1957; M.D., Univeristy of Mississippi School of Medicine, Jackson, MS., 1984; interned and pediatric residency, University Medical Center, Jackson, MS 1984-87; elected by East Mississippi Medical Society.

Stagg, Stephen Woodson, Vicksburg. Born Eunice, LA, March 7, 1960; M.D., Louisiana State University School of Medicine, New Orleans, LA, 1985; interned and internal medicine residency, University of Texas Medical Branch Galveston, TX, 1985-88; gastroenterology fellowship University of Tennessee, Memphis, TN, 1988-89; elected by West Mississippi Medical Society.

Windham, Thomas Lynn, Oxford. Born Jackson, MS., December 21, 1942; M.D., University of Mississippi School of Medicine, Jackson, MS, 1969; interned one year Brooke General Hospital, San Antonio, TX; neurological surgery residency, University of Alabama, Birmingham, AL, 1972-76; elected by North Mississippi Medical Society.

DEATHS

Carlson, George C., Batesville. Born Quitman, MS., April 29, 1911; M.D., Vanderbilt University School of Medicine, Nashville, TN, 1936; interned two years, Baptist Memorial Hospital, Memphis, TN., 1936-38; died July 23, 1990, age 79.

Dominick, Thomas B., Vicksburg. Born Vicksburg, MS, September 12, 1914; M.D., Washington University School of Medicine, St Louis, MO, 1940; interned St Louis City Hospital, St Louis, MO, 1940-41; radiology residency, Same, 7/1/41-8/22/41 and 1/1/46-7/1/47; died July 24, 1990, age 75.



DEATHS/Continued

Godman, George E., Wiggins. Born Terry, MS., August 31, 1891; M.D., Tulane University School of Medicine, New Orleans, LA, 1928; interned one year Newell's Hospital, Chattanooga, TN; surgery residency, DePaul Hospital, Norfolk, VA, 7/1/49-7/1/51; died August 3, 1990, age 99.

Herring, Preston S., Vicksburg. Born Vicksburg, MS, August 21, 1902; M.D., Tulane University School of Medicine, New Orleans, LA, 1926; interned one year Charity Hospital, New Orleans, LA; died February 24, 1990, age 87.

Lee, Robert E., Greenville. Born Lumberton, MS, December 17, 1929; M.D., Tulane University School of Medicine, New Orleans, LA, 1954; interned St Thomas Hospital, Nashville, TN, one year; died July 30, 1990, age 60.

Walley, Cecil R., Jackson. Born Richton, MS, December 17, 1905; M.D., Emory University School of Medicine, Atlanta, GA, 1935; interned one year Illinois Central Hospital, Chicago, IL, died June 28, 1990, age 84.

Witt, William Johnson, Jackson. Born New Mexico, March 2, 1916; M.D., University of Tennessee College of Medicine, Memphis, TN, 1939; interned one year Baptist Memorial Hospital, Memphis, TN; died August 10, 1990, age 74.

PERSONALS

William M. Aden, M.D., has associated with W. Boyce Craig, M.D., and Professional Eye Care Associates, Diseases and Surgery of the Eyes.

William R. Arnett, M.D., of Hattiesburg was elected to the District II Board of Directors of the Mississippi Academy of Family Physicians. He will serve a two-year term.

Dennis Aust, M.D., announces the opening of Greenwood-Leflore Children's Clinic, Diseases of Infants, Children, and Adolescents, 1801 Strong Avenue, Greenwood.

Stephen W. Baker, M.D., Board certified in internal medicine and cardiology has associated with Coast Cardiology Center and Bharat Sangani, M.D.

John Bagnato, M.D., of Hattiesburg performed a thoroscopic pulmonary resection operation, a first-time surgical procedure for Hattiesburg, using a new endoscopic stapling device.

Don Benefield, M.D., announces the opening of his office for the practice of ophthalmology at Benefield Eye Care, 743 16th Street, Gulfport.

Frank W. Bowen, M.D., of Carthage was elected secretary-treasurer of the Mississippi Chapter of the American Academy of Family Physicians.

Nancy Dru Bryant, M.D., has joined the staff of Singing River Hospital, Pascagoula, for the practice of obstetrics and gynecology.

Gary D. Carr, M.D., of Hattiesburg, was named to *Who's Who in Mississippi*. He also attended an AMA workshop entitled, "Starting Your Practice" and will be opening his practice at the Oak Grove Family Clinic.

C. Ron Cannon, M.D., chief of staff at River Oaks Hospital, Jackson, received the Honor Award presented by the American Academy of Otolaryngology — Head and Neck Surgery.

Thad Carter, M.D., announces the relocation of the Gulfport Clinic to 1203 Broad Avenue.

Sam J. Denny, M.D., has joined **Grady Marlow, M.D.,** in the practice of family medicine at his office at 633 W. Service Drive in Coldwater.

J. David Fagan, M.D., has associated with the Vicksburg Clinic in the Department of Urology.

Walter D. Gunn, M.D., of Quitman has been named president of the Medical Alumni Chapter of the University of Mississippi Alumni Association.

Stanley Hartness, M.D., of Kosciusko was elected president-elect of the Mississippi Chapter of the American Academy of Family Physicians.

Goeffery Hartwig, M.D., of Hattiesburg addressed the Hattiesburg Epilepsy Support Group.

Joseph Hasek, M.D., announces the opening of his practice for General Medicine, 205 Walnut Avenue, Eupora.

Mike Haven, M.D., has joined the staff of Tyler Memorial Hospital in Winona to oversee the facitlity's emergency room.

Elizabeth Connell Henderson, M.D., gave a talk on "The Perils and Pearls of Parenting" as a part of the Cameo Series at Women's Hospitals.

Patrick Hsu, M.D., was a participant in the First Annual Southern Symposium on Gynecologic Laser Surgery and completed specialized training in laser surgery at West Side Hospital in Nashville.



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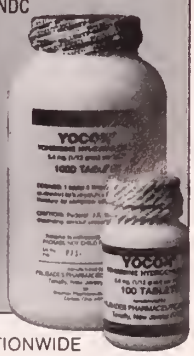
Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

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Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema*: Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General. Impaired Renal Function*. As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (>5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy – Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), pulmonary embolism and infarction, pulmonary edema, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis (hepatocellular or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth.

Musculoskeletal: Muscle cramps.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin: Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, hyperhidrosis.

Special Senses: Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing.

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgias/arthritis, myalgias, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension*: In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium. (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Patients with Heart Failure and Renal Impairment or Hyponatremia: In patients with heart failure who have hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

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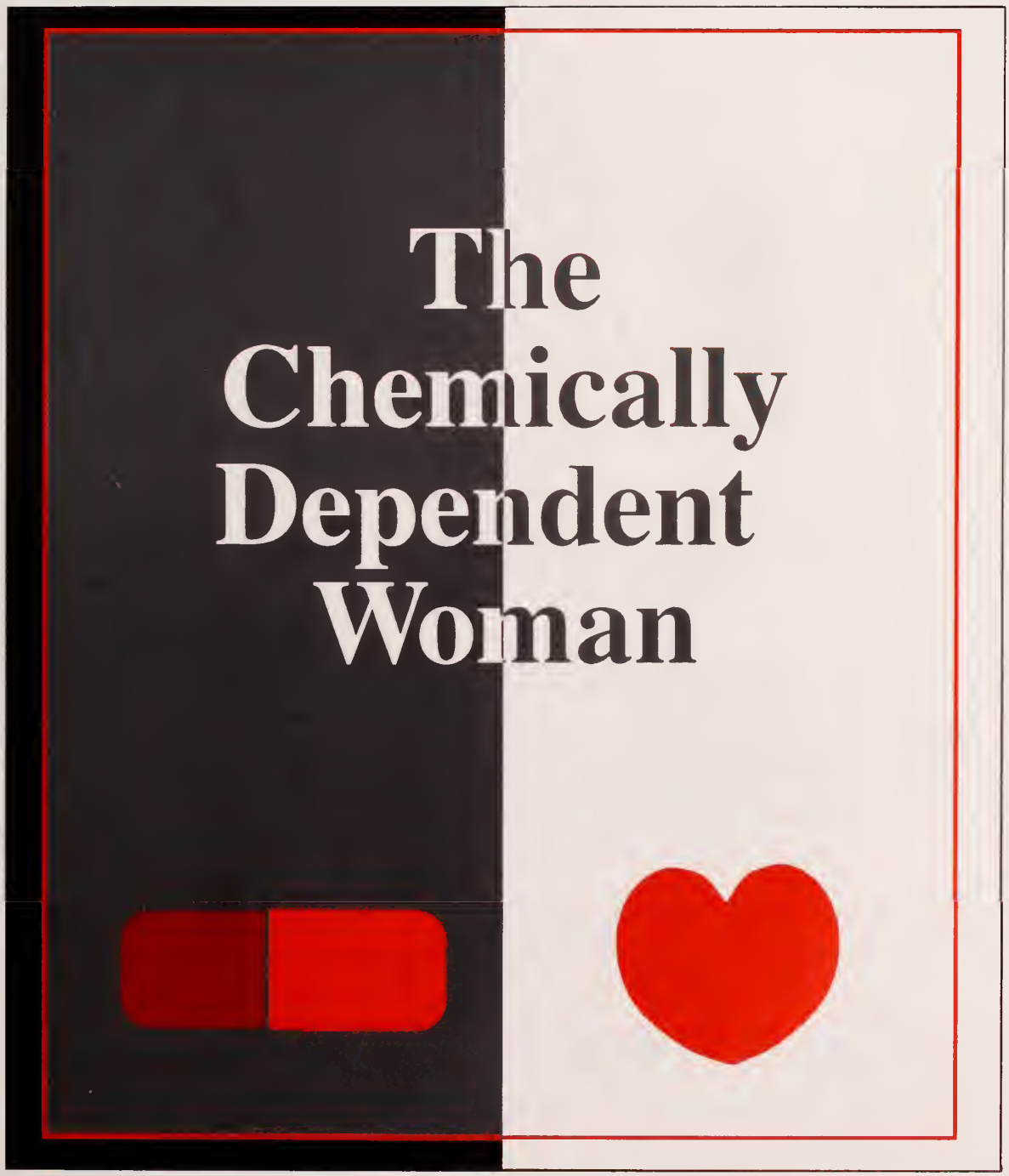
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The Chemically Dependent Woman





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AIR FORCE

NEWSLETTER

November 1990

Dear Doctor:

As a part of the National Drug awareness effort, MSMA and the Mississippi Council on Aging is stressing drug awareness among the elderly. Approximately 10,000 brown bags with the words **"Take Your Medicines In For A Checkup"** printed in red have been distributed to local area agencies on aging. Agency clientele will be instructed to take all their medicines, both prescription and non-prescription, to their local physician in the brow bag for review at their next office visit.

Since August, twenty-six of Mississippi's Junior and Senior High Schools have been participating in the State's first Comprehensive Health Education Pilot Program. Response to this program has been excellent. Teacher's report that it has truly been an exceptional learning experience for students, parents and teachers alike. At the end of the school year, these students will be re-evaluated to see if the information discussed in these classes has actually affected behavior.

In this issue of the Journal on page 381 is the AMA Delegates Report. Each month, a member of our Mississippi Delegation will be reporting to you on activities of the American Medical Association that serve the interests of the medical profession and the public. We begin this month with a report from Dr. Sidney O. Graves. Also in this issue is an article concerning sports participation physical examinations. Included in this article is a list of recommendations for participation in competitive sports and a classification of activities prepared by the American Academy of Pediatrics' Committee on Sports Medicine.

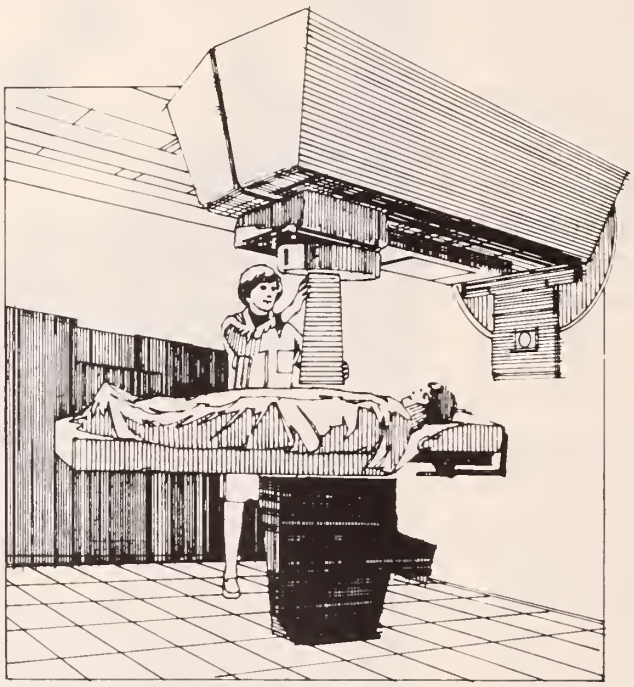
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Managing Editor

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DATELINE

Practice Management Workshops Scheduled

Jackson, MS - Three Practice Management Workshops sponsored by MSMA will be conducted on ICD-9 coding. Workshops will be held Wednesday, Dec. 5, in Tupelo; Thursday, December 6 in Jackson; and Friday, December 7, in Biloxi. Martha Barrett of Travelers Medicare will be the guest speaker. For additional information call MSMA at 354-5433.

AMA Seeks IG's Dismissal

Chicago, IL - The AMA has called on President Bush to fire Department of HHS Inspector General Richard Kusserow stating that "competent and honest physicians have been damaged and many more have been unnecessarily harassed" by activities of Kusserow's office. The request was made after his appearance on the ABC-TV "Primetime Live" program.

MS Schools Lose Nurses Due to Grant Cuts

Jackson, MS - Federal grant cuts are slicing in half a school-nurse program aimed at reducing the state's high teen-age pregnancy rate. Seven of the 14 counties with State Department of Health nurses in their school districts will lose those nurses by Oct. 31. About 20.7 percent of all births in the state in 1988 were to teen-agers.

Parental Consent Bill Passes

Lansing, MI - The legislature has approved a measure requiring that girls 17 or younger get consent from a parent or a judge to have an abortion. The requirement takes effect next spring. Michigan's constitution provides that lawmakers can adopt such an initiative without a referendum and that the measure can't be vetoed.

Women's Health Office Opens

Washington, DC - The National Institutes of Health, stung by criticism that women have been excluded from biomedical research, has established an Office of Research on Women's Health. Interim director of the office is Ruth L. Kirschstein, MD, director of the National Institute of General Medical Sciences.

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JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
November 1990, Volume XXXI, Number 11

ORIGINAL PAPERS

Laparoscopic Common Bile Duct Exploration

JOHN BAGNATO, M.D.
Hattiesburg, Mississippi

Laparoscopic cholecystectomy has been shown to be a viable alternative in the management of patients with cholelithiasis. Laparoscopic cholecystectomy is the most effective treatment for gallstones, and at the same time reduces patient inconvenience and recovery time when compared to traditional cholecystectomy. When compared to nonoperative alternatives for the treatment of gallstones, laparoscopic cholecystectomy is superior because it is the definitive treatment with minimal trauma. Laparoscopic cholecystectomy has in our experience been applied to all patients with cholelithiasis, including those with acute cholecystitis, morbid obesity, and previous upper abdominal surgery. Our success rate in over eighty patients is ninety-two percent successful laparoscopic cholecystectomy.

The extension of laparoscopic techniques to the treatment of patients with choledocholithiasis represents a major advance in biliary tract surgery. The difference in morbidity of open common bile duct exploration versus laparoscopic common bile duct exploration is quite dramatic. We report the use of the laparoscopic approach to exploration of the common bile duct.

Case Reports

Case 1: A 62 year old lady who had a common duct stone and pancreatitis had a laparoscopic common bile duct exploration on March 5, 1990. Her stone had been evaluated by ultrasound. She had elevated liver function tests and was admitted for laparoscopic cholecystectomy. An Olympus angioscope was inserted into the common duct and the stone pushed into the duodenum. A follow-up cholangiogram was normal. She was discharged home on the second post-op day without a drain or T-tube.

Case 2: A 23 year old white female who had jaundice with a bilirubin of 5, and abnormal liver function tests consistent with biliary obstruction. She had cholelithiasis documented by ultrasound. A laparoscopic cholecystectomy was undertaken on March 15, 1990, and a cholangiogram obtained which revealed a common duct stone. The cystic duct was dilated using ureteral dilators and an Olympus ureteroscope was inserted into the common duct through the cystic duct and the stone visualized. A stone basket was positioned in the common duct and the stone grasped and removed. She was discharged from the hospital on the second post-operative day. No drain or T-tube was used. Two month follow-up has been obtained in both patients without post-operative problems reported.

Discussion

Laparoscopic common bile duct exploration represents a viable alternative in the treatment of pa-

From the Surgery Clinic of Hattiesburg, P.A., Hattiesburg, MS.

tients with common duct stones. Laparoscopic cholecystectomy has been accepted with unprecedented rapidity because it minimizes the trauma of surgery and greatly shortens recovery time. Likewise, the benefits of laparoscopic cholecystectomy can now be extended to patients with common duct stones. Additionally, laparoscopic common bile duct exploration alleviates the need for a T-tube and drain. Consequently, hospital stay and recovery time are shortened greatly when compared to traditional common bile duct exploration.

Routine intraoperative cholangiography during laparoscopic cholecystectomy is necessary to determine the biliary anatomy and position of the common bile duct to minimize injury to the common bile duct and common hepatic duct. Obviously intra-operative cholangiography aids in the diagnosis of choledocholithiasis, but also is mandatory in determining the size of the common bile duct and size of the cystic duct which are important in determining whether a successful laparoscopic common bile duct exploration can be performed. Selective use of pre-operative Endoscopic Retrograde Cholangiopancreatography may likewise prove of some benefit. However, the advantages of laparoscopic common bile duct exploration as opposed to Endoscopic sphincterotomy are that the patient undergoes one definitive procedure and the sphincter Oddi remains intact.

To alleviate the need for a T-tube the common duct is accessed via the cystic duct. Laparoscopic common bile duct exploration through the cystic duct is much easier to perform than a laparoscopic CBDE with a choledochotomy, which then must be sutured closed over a T-tube. This can be accomplished by careful and gentle dilatation of the cystic duct using ureteral dilators to a size of 10 French. The 10 French ureteroscope is then passed into the cystic duct. Patients who have common duct stones should generally have large cystic ducts which are not obstructed, otherwise they would not have stones which have passed from the gallbladder into the common bile duct. Cannulation of the cystic duct with the ureteroscope is therefore a reliable option and will become easier as improvements and refinements in instrumentation are made. The scope has a 3-4 mm. channel and the tip can be deflected which is very helpful when instrumenting and manipulating stones. The angioscope is smaller, but non-deflectable and very difficult to instrument through. However because of its size, the angioscope may be useful in diagnosis by visual inspection of the common bile duct and ampulla. However, if stones are known to be present in the common duct the only scope currently available that is useful is the ureteroscope which has been designed to remove stones from the ureters. Several companies manufacture ureteroscopes which are adaptable to the common duct. This should change rapidly as laparoscopic choledochoscopes are developed. It is the adaptation of urologic techniques and instruments to common duct stones which makes the procedure feasible.

Once the scope is in the common duct and the stones visualized they can be removed endoscopically in 4 ways: 1) grasped with stone basket; 2) crushed with endoscopic lithotripsy; 3) ablated or destroyed with laser; or, 4) pushed into the duodenum. With current instrumentation removing the stone should be fairly easily accomplished once the stone is visualized. If the duct cannot be cannulated with the ureteroscope or the stone cannot be removed, then the operation can be converted to a traditional common duct exploration which is the most likely alternative anyway.

The only disadvantage of this technique is the inability to retroflex the scope into the common hepatic duct. This should not prove to be too important because statistically most stones are located in the common duct. However, follow-up intra-operative cholangiography is mandatory to be sure the duct has been cleared of stones.

Because of the advantage of rapid recovery and less pain laparoscopic biliary procedures have gained great acceptance by the public and enjoyed much publicity. Further advances can be predicted as instrumentation is improved and the surgical experience broadens. Laparoscopic biliary surgery will probably replace traditional cholecystectomy and common bile duct exploration as the treatment of choice for patients with biliary lithiasis. With the availability of laparoscopic common bile duct exploration, essentially all patients with cholelithiasis and complications of cholelithiasis are now considered candidates for laparoscopic cholecystectomy.

★★★

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The Chemically Dependent Woman

H. THOMAS MILHORN, M.D., Ph.D.
Jackson, Mississippi

WOMEN, LIKE MEN, are at risk for developing alcoholism, prescription drug addiction, and addiction to elicit drugs. Women, however, have the capacity to directly affect another human being (the unborn child) by their drug use.

Alcohol

In recent years equality for women has included greater freedom to drink. As a result, heavy drinking is on the rise among young, employed females. The number of women in the United States who drink alcohol has increased from 45 percent to 66 percent over the past 40 years. Surveys in the community indicate that 5 percent of women are heavy drinkers. Because society considers it less acceptable for a woman to be a heavy drinker than a man, a woman's drinking problem is often hidden or ignored by family, friends, and employer. This attitude delays or prevents women from receiving treatment.

Alcohol related ulcer surgery, gastrointestinal hemorrhage, fatty liver, hypertension, anemia, and malnutrition occur at significant rates in women. Women also seem to be more susceptible to the hypertensive and cirrhotic effects of alcohol. The death rate for alcoholic women is greater than the death rate of non-alcoholic women. Factors reflecting women's unique physiology (menopause, postpartum depression, premenstrual mood changes) have been mentioned as possible precipitance of alcohol abuse in women, but clear documentation of this is lacking.

In the early days of ancient Rome, drinking of wine by women was an offense punishable by death. This law, which prohibited alcohol use by women, was linked to the prohibition against adultery by women. Thus, the idea that drinking by women was associated with "loose" behavior was established early in Western culture. In contemporary American society, the woman who drinks in excess is triply stigmatized. First, she is included in society's negative attitude towards all alcoholics, secondly, she is subjected to the special disgust focused on the intoxicated woman, and third, the idea that drunkenness and sexual promiscuity are linked add to the burden of disapproval. As a result, solitary drinking by alcoholic women is more common than by alcoholic men. Thus, the female alcoholic is often referred to as the "hidden alcoholic." The negative attitude of society in general influences not only the behavior of the alcoholic woman herself, her family, and her friends but also affects the attitudes and expectations of those in the helping professions (physicians, nurses, psychologists, social workers). Rather than diagnosing an alcoholism problem, the physician will all too often prescribe a bottle of tranquilizers, with the result that many alcoholic women are cross-addicted to prescription drugs.

Divorce rates for alcoholic women are much higher than for alcoholic men. Nonalcoholic wives are far more likely to remain with their alcoholic husbands than nonalcoholic husbands with their alcoholic wives.

When women drink at a rate comparable to that of men their smaller size and higher proportion of body fat causes a higher blood alcohol level. Whereas men are inclined to snack while drinking, women are often dieting to stay thin so they drink on an empty stomach, resulting in quick absorption of alcohol into the bloodstream. Women who use oral contraceptives metabolize ethanol significantly more slowly than women not using this type of contraceptive. Furthermore, in the premenstrual phase, women absorb alcohol more quickly and completely than in the postmenstrual phase. Women tend to begin using alcohol at a later age than men and to progress more rapidly into middle and late stage alcoholism, a phenomenon known as *telescoping*.

Other Drugs

Women are particularly at risk for becoming dependent on prescription drugs. They make visits to physicians more frequently than men and tend to complain of non-specific anxiety. As a result, they

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are often prescribed minor tranquilizers, such as diazepam (Valium), alprazolam (Xanax), or lorazepam (Ativan). They thus learn that the use of chemicals is a quick and easy way to cope with stress. It is not as easy for many women to unwind with a few drinks in a bar as it is for men, so they are more likely to seek medical relief from stress.

Women are at risk for addiction to the same elicit drugs as men. However, some differences do exist. Female cocaine addicts, for example, have a greater incidence of major depression than men. Furthermore, abstinent women do not appear to recover from their depression as rapidly as men. Women tend to develop addiction to cocaine more rapidly than men.

Fertility

Psychoactive substances disrupt neuroendocrine and gonadal function with sufficient magnitude to cause infertility in some patients. Normal individuals may only experience subtle changes in sexual function. However, individuals with compromised reproductive function may exhibit major problems. The disruptive effects of these drugs are usually completely reversible with cessation of drug use. Most protocols for the evaluation of unexplained infertility now include investigation of drug abuse history.

Diagnosis

The information required to confirm a diagnosis of chemical dependence in women is basically the same as that for men. Women complain more often of a wide range of symptoms, including depression, anxiety, sleeplessness, lethargy, stomach problems, and injuries from accidents or physical abuse. Chemically dependent women compared with controls report a higher incidence of infertility, postpartum depression, irregular menstrual cycles, and amenorrhea. Female addicts are less likely than males to report difficulties with work, the law, or violent behavior. They are more inclined to report problems with their relationships and children as a result of substance abuse.

In taking a drug history, additional questions specifically appropriate for women include: Do you ever carry an alcoholic beverage in your purse? Does your drug use vary with your menstrual cycle? Has your drinking or using had any effect on regularity or quantity of your menstural periods? What effect do you think your drug abuse has had on your children? Has there been physical violence in your home (spouse abuse or child abuse)?

Treatment

Women are proportionately a minority in most treatment programs, averaging about 20 percent of the patients. As a result, many chemically dependent women find themselves in treatment programs designed for men. Women need to feel comfortable with themselves and are reluctant to discuss many of their problems, such as rape or spouse abuse, in mixed company. Hence, all-women groups are important, especially in early recovery.

Alcoholic women are more likely than nonalcoholic women to have alcoholic husbands or lovers and to be at increased risk for domestic violence. Frequently, women addicts are incest survivors, victims of child or spouse abuse, rape victims, or daughters of alcoholic parents. To be most effective, a treatment program for chemically dependent women must address their practical needs, such as child care and job training. Unfortunately, the disadvantaged position of women addicts in society causes many of them to be unable to afford treatment.

Low self-esteem seems to be an important feature of all addiction, but particularly of female addicts. How a woman feels about herself depends on developmental, psychological, and societal factors. Self-esteem for many is dependent on occupation. The lesser value assigned to tasks normally identified as women's work, and the lower salaries earned by women, are important factors in their self-esteem. Housekeeping and child-care in the United States are assigned little or no economic value. Most married women in the workforce still carry the major responsibility for the family cleaning, shopping, cooking, laundry, and child-care in addition to their outside employment. Both as a factor in her illness and her recovery, the importance of occupation should be explored individually with each chemically dependent woman. Vocational rehabilitation, more adequate child-care, and changes in family attitudes and behavior will be indicated in many cases.

Because responsibility for the care of children is usually part of the female role in American society, and because chemically dependent women are frequently separated or divorced, the female addict entering treatment is far more often the head of a single-parent family than is the chemically dependent male. As a result, child-care is a major need in the treatment of chemically dependent women. Women can not benefit maximally from treatment if they are concerned about the welfare of their children. Feelings of guilt for being a "failure as a

mother'' may be a major problem.

The most useful categorization of alcoholism is the distinction between primary alcoholism (no pre-existing emotional disorder) and secondary alcoholism (pre-existing emotional disorder). Most patients presenting for treatment are of the primary type. Among men the most common form of secondary alcoholism is that associated with antisocial personality disorder. This is true of other drug addictions as well. In women the most common secondary type is that associated with depression. Diagnosis of primary depression must be based on a careful life history, since the presence of depressive symptoms at the time of treatment will not differentiate between primary and secondary alcoholism. Once a woman is identified as a secondary alcoholic, long-term treatment should include, in addition to alcoholism treatment, attention to possible recurrence of depression. Early treatment of such recurrence may help her maintain sobriety. Female alcoholics attempt suicide or make suicide gestures more frequently than males.

A woman is often defined through her relationship to others. She is someone's daughter, someone's wife, someone's mother, or even someone's ex-wife. Male dependence may be a treatment issue. Helping the alcoholic woman confront her feelings about herself as an independent individual is an important part of treatment.

Structuring of one's life is important for all female addicts. If she goes back to the unstructured world of housework and child-care she runs a greater risk of relapse, especially if that is not her role preference. Educational goals should be explored, whether it is a high school equivalency diploma, a college, or a post-graduate degree. Trade schools should be explored and used as resources.

Some alcoholic women relate drinking episodes to their menstrual cycle, particularly in the premenstrual period. Strategies such as ibuprofen (Motrin) therapy for relief or prevention of dysmenorrhea, extra AA meetings, and telephone contact by the AA sponsor should be planned with the patient to help her negotiate this difficult period.

The Pregnant Addict

Although drug use of all types, including alcohol, appears to be increasing in this country, it appears to be increasing faster in women than in men and the overwhelming majority of this population is reproductively active. It is now abundantly clear that gestational abuse of any mood-altering substance can cause serious maternal and perinatal problems. Many women addicts use more than one drug. The combination of alcohol, marijuana, cocaine, and nicotine is common. Evaluation of risk factors for the pregnant addict and her newborn must take into consideration all of these drugs. Identification of pregnant addicts, however, is difficult. They often attempt to conceal their addiction by obtaining medical treatment for an array of somatic complaints, such as headaches, anxiety, or low back pain. Although usually denying elicit drug use, most chemically dependent pregnant women will admit to use of legal drugs (caffeine, nicotine, alcohol).

Medical Problems. A 40 to 50 percent incidence of medical complications among elicit drug-dependent women has been reported. These most frequently include anemia, endocarditis, phlebitis, cellulitis, hepatitis, hypertension, urinary tract infection, and venereal disease. In addition, the pregnant intravenous drug user is at increased risk for contacting Acquired Immune Deficiency Syndrome (AIDS). Regardless of the route of drug administration, the economic necessities to support a drug addiction by illegal means (theft, prostitution), secondary malnutrition, and the associated unhealthy personal and family psychosocial environment further complicate maternal well being and prenatal care.

Obstetrical Concerns. Obstetrical concerns about the pregnant addict include low birth weight, preterm labor and birth, intrauterine infection, fetal distress in labor, and congenital abnormalities. The cramps of opioid withdrawal may be confused with premature contractions or abruptio placenta.

Maternal Detoxification. Detoxification of pregnant women should be individualized according to the primary drug of abuse and the stage of gestation. Detoxification prior to 14 weeks of gestation is not advocated due to the risk of inducing abortion. Likewise, during the last trimester of pregnancy, detoxification is not advised because of the risk of provoking preterm labor of fetal distress.

Whether to detoxify the opioid dependent woman at any time during pregnancy remains controversial. Currently, the safest procedure appears to be to switch them from their opioid of choice to methadone maintenance where such programs are available to avoid the danger of relapse, with repeated intoxication and withdrawal cycles. Both mother and baby are individually detoxified from methadone after birth. Methadone maintenance for opioid-addicted pregnant women removes them from the drug-seeking environment, eliminating the illicit behavior associated with it, preventing vacillations in maternal (and fetal) drug levels, improving maternal nutrition, and involving them in prenatal care and

psychological/social rehabilitation.

When it is absolutely essential for the pregnant opioid addict to be detoxified from methadone during pregnancy, it should be done by decreasing the dose by 5 mgs every other week between the 14th and 28th week of gestation.

Role of the Physician

The physician should be aware that women, like men, are at risk for addiction to alcohol, nicotine, and elicit drugs, and that they are especially at risk for iatrogenic prescription drug dependence, the rate of alcoholism is increasing in women, especially the younger employed ones, drug abuse can have an adverse effect on fertility, certain areas of women's lives are more apt to be affected than men's, women have specific treatment issues different from those of men, and women, by their drug abuse, have the ability to adversely affect another (the fetus). In addition, the physician should have the knowledge, once the diagnosis of chemical dependence is made, to refer the pregnant addict for obstetrical and neonatal care. ★★★

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Percutaneous Endovascular Therapy For Inoperable Intracranial Aneurysms

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ENDOVASCULAR is a term coined during the past decade and refers to treatment rendered from within a blood vessel without producing external incisions. The field of endovascular surgery and interventional neuroradiology arose through modern imaging modalities and the development of fine latex and silicone balloons. The concept however is not new. In 1964 Luessenhop and Velasquez were the first to use catheters and balloons in the intracranial circulation for the introduction of emboli.[1] Ten years later, Serbienko, a neurosurgeon from the Soviet Union, reported the use of a detachable balloon for occluding the parent artery in the treatment of unclippable cerebral aneurysms.[2] Later, Romadanov and Shcheglov introduced the intravascular occlusion of saccular aneurysms of the cerebral arteries by detachable balloon catheters.[3] Hundreds of cases have now been treated using these techniques (personal communication, Shcheglov).

Balloon occlusion is not applicable to every situation however.[4] Balloons are known to dislodge thrombi from certain aneurysms, and ischemic complications may follow.[5] Some aneurysms, due to recent hemorrhage, may not be suitable for balloon occlusion because of the risk of rebleeding. Likewise, some intracranial aneurysms, by virtue of their location, are as elusive to the endovascular surgeon as they are to the conventional neurosurgeon.[4] The following case illustrates such a condition. Because of its size and location, the aneurysm was difficult to approach surgically. Moreover, due to the hard atheroma and thrombus in the wall, a clip would not close around the neck without compromising major vessles. And ultimately, because of the flow derangements near the orifice, a balloon could not be safely passed into the aneurysm. Thus, platinum coils were used to produce near complete thrombosis of the aneurysm and thus confer protection to the patient from subsequent growth and rupture.

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Case Report

A 58-year-old white female from the Mississippi Delta was referred to the Medical Center because of head pain and diplopia. On examination, there was slight ptosis on the right and right medial rectus weakness. The CT scan showed a mass in the interpeduncular cistern with a laminated pattern compatible with thrombus in an aneurysm. The arteriogram (see Figures 1-A, 1-B) revealed a large aneurysm of the basilar apex, not as large as that

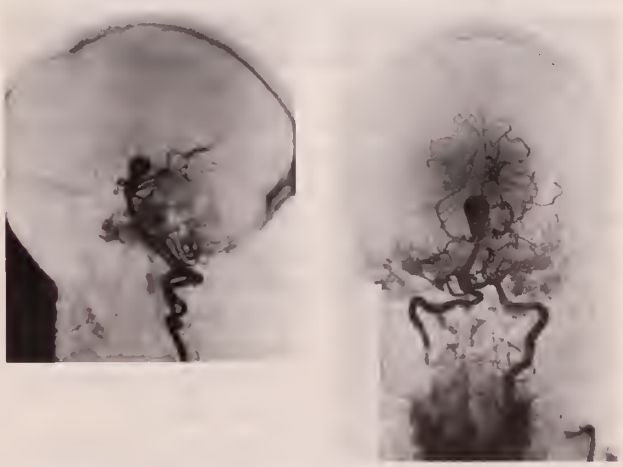


Figure 1. A *and* B: *Lateral and AP vertebral basilar angiogram showing a large basilar apex aneurysm.*

seen on the CT scan, indicating partial thrombosis. MRI confirmed these findings and showed distor-



Figure 2. An MRI scan demonstrating the flow pattern within the aneurysm which is filled with thrombus. There is also brainstem compression shown.

tion of the right cerebral peduncle (see Figure 2).

After her admission, a right pterional craniotomy was performed and the basilar artery and basilar aneurysm was exposed. Multiple attempts to place a clip along the neck of this aneurysm failed because the clip either would not close or would migrate proximally blocking the origins of the posterior cerebral arteries. Leapfrog maneuvers were attempted in which one clip is placed into position while another is placed more distal to it, gradually working toward the fundus of the aneurysm. In each case however, the clip migrated because of hard atheroma and thrombus in the aneurysm wall. Opening the aneurysm and performing aneurysmectomy were deemed inappropriate since proximal control was never achieved. The operation was therefore terminated. The patient tolerated the procedure without difficulty, but during the ensuing weeks there was progression of her neurological deficit. A left upper extremity monoparesis developed. MRI showed the large mass encroaching further upon the cerebral peduncle. She was readmitted, and in the angiographic suite an attempt was made to pass a specially constructed balloon into the aneurysm. Because of the flow dynamics at the basilar apex however, the balloon migrated into the posterior cerebral arteries instead and an attempt to use a helper balloon was attempted, but this too was unsuccessful.

Her neurological deficit progressed further, and she was readmitted. Once again attempted placement of a detachable balloon within the aneurysm failed and therefore a new approach was tried. Utilizing two large sheaths, it was possible to place a Tracker 18 into the aneurysm itself through one sheath, while occluding the mouth of the aneurysm with a nondetachable silicone balloon through the other. Five large complex helical coils were then placed uneventfully into the aneurysm. In order to achieve absolute hemostasis, 3 smaller coils were also placed in the aneurysm.

She was readmitted on 03-29-90 and repeat angiography demonstrated occlusion of the aneurysm dome with only a small but incompletely thrombosed dilatation at the origin (see Figure 3-C). Pressure within the dome and upon the cerebral peduncle





Figure 3. A, B, *and* C: *There is postoperative occlusion of the fundus and main body of the aneurysm.* C *is a nonsubtracted view demonstrating multiple platinum coils within the aneurysm.*

had been eliminated however, and edema within the brainstem had decreased on MRI examination.

After the procedure, the patient improved slowly continuing to have a third cranial nerve paralysis. Although the left upper extremity weakness continues, physical therapy has been instituted, and it is anticipated that the aneurysm will continue to shrink due to fibrosis.

Discussion

In dealing with aneurysms, some endovascular surgeons attempt to manipulate a single balloon into the aneurysm sac by virtue of flow characteristics in the vicinity. Others employ "helper balloons."[5] The helper balloon may change the flow pattern in order to direct the detachable balloon into the proper branch of the circulation or it may be used to deflect the primary or detachable balloon into the aneurysm orifice.[5, 6] The helper balloon may also be used as a safety device.[5] Should the detachable balloon rupture the aneurysm prematurely, the "helper balloon" can be pulled into the orifice and the vessel occluded until the surgeon can place a clip along the ruptured portion.[5] More than one balloon may also be needed to completely fill the aneurysm and obliterate the neck.[3] Once the neck has been obliterated, the endothelium apparently covers the orifice. In general, thrombosis provides permanent protection against further aneurysm leakage or growth. Aneurysms having a firm wall and in which distal embolization is unlikely are those most appropriate for endovascular treatment. Those at the basilar apex and carotid artery near the cavernous sinus are particularly well suited for endovascular treatment.

Thrombosis produced by platinum coils seems to depend on mechanical interruption of flow and resulting stasis. The flower petal design allows the coil to approximate more closely the shape of the aneurysm into which it must be placed.[7] The ability to deliver small coils to the arteries of the brain and spine via microcatheters however makes the coils especially useful for the intracranial circulation. In experimental aneurysms, coil migration out of the aneurysm occurs rarely (less than 6%), but extraaneurysmal thrombus is much more common.[8] Platinum has the distinct advantage of being a radiopaque, available, biocompatible, and thrombogenic agent, as well as MRI compatible.[9, 10] The coils can also be augmented with thrombin or other organic material.[7]

Endovascular surgery is a developing field, and many aneurysms that we now view as surgical lesions may be managed in the future with intravascular methods. In general, we view these techniques as operative and the same complications expected from a craniotomy and operative clipping also occur using these new methods. Premature aneurysm rupture, vasospasm, occlusion of adjacent vessels with ischemic neurological deficits have all been reported using intravascular techniques. These kinds of procedures should only be performed by a skilled interventional endovascular physician with an aneurysm surgeon and operating room available.

★★★

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SPECIAL ARTICLE

The Pre-participation Physical Examination for Sports

During the 122nd Annual Session, the Mississippi State Medical Association House of Delegates adopted a resolution urging MSMA and its members to encourage and participate in education programs for junior and senior high school coaching staffs. This resolution is stated as follows:

"RESOLVED, that the Mississippi State Medical Association encourages each public and private junior and senior high school to have a qualified athletic trainer or team physician and make every effort to have emergency transport services available at all sports activities, be it further

RESOLVED, that MSMA encourage each public and private junior and senior high school to have its coaching staff participate annually in educational programs dealing with the prevention, identification, and management of athletic injuries, and be it further

RESOLVED, the MSMA offer its services in sponsoring educational programs and seminars related to athletic injuries."

In the context of this resolution MSMA has recently contacted the Mississippi Association of Coaches to offer to conduct a sports medicine seminar at a convenient time and place for its members.

MSMA would like to see the development of consistent standards among all Mississippi schools for pre-participation athletic examinations. The pre-participation physical examination for sports is one of the most common reasons that a child or an adolescent visits a physician.

The purpose of the pre-participation examination is to determine whether athletes should be allowed to participate in particular sports. An underlying goal of pre-participation physical examinations is to encourage young people to engage in organized sports and fitness activities, which promote health and help prevent disease.

Since many of our MSMA members are currently involved with school athletic programs and others are getting involved, the Journal MSMA is reprinting a portion of a report published in *Pediatrics 1988;81:737.*

The American Academy of Pediatrics' Committee on Sports Medicine has compiled a list of recommendations for participation in competitive sports and a classification of sports activities. These recommendations were developed to assist practitioners with their examination.

Sporting events were divided into groups depending on their degree of strenuousness and probability for collison (see Figure). These groups of sports were then assessed in light of common medical and surgical conditions to determine whether participation would create a substantial risk of injury (see Table).

Certain activities, such as skiing, are not inherntly "contact sports." Yet, when competitors fall and collide with the ground, they are as much at risk at participants in the more traditional collision/contact sports. Hence, these sports are included in a group called "limited contact/impact."

A list of all medical conditions that would disqualify athletes from participation would be nearly endless. Therefore, a concise table that could be considered quickly and easily was developed from the committee recommendations.

The American Academy of Pediatrics' Committee on Sports Medicine recommendations should only be used as a guideline; the physician's clinical judgement should remain the final arbiter in interpreting these recommendations for a specific patient.

TABLE

RECOMMENDATIONS FOR PARTICIPATION IN COMPETITIVE SPORTS

			Noncontact		
	Contact/ Collision	*Limited Contact/Impact*	*Strenuous*	*Moderately Strenuous*	*Nonstrenuous*
Atlantoaxial instability *Swimming: no butterfly, breast stroke, or diving starts	No	No	Yes*	Yes	Yes
Acute illnesses *Needs individual assessment, eg, contagiousness to others, risk of worsening illness	*	*	*	*	*
Cardiovascular					
Carditis	No	No	No	No	No
Hypertension					
Mild	Yes	Yes	Yes	Yes	Yes
Moderate	*	*	*	*	*
Severe	*	*	*	*	*
Congenital heart disease *Needs individual assessment.[2] †Patients with mild forms can be allowed a full range of physical activities; patients with moderate or severe forms, or who are postoperative, should be evaluated by a cardiologist before athletic participation.[3]	†	†	†	†	†
Eyes					
Absence or loss of function of one eye	*	*	*	*	*
Detached retina *Availability of American Society for Testing and Materials (ASTM) approved eye guards may allow competitor to participate in most sports, but this must be judged on an individual basis.[3, 4] †Consult ophthalmologist	†	†	†	†	†
Inguinal hernia	Yes	Yes	Yes	Yes	Yes
Kidney: Absence of one	No	Yes	Yes	Yes	Yes
Liver: Enlarged	No	No	Yes	Yes	Yes
Musculoskeletal disorders *Needs individual assessment	*	*	*	*	*
Neurologic					
History of serious head or spine trauma, repeated concussions, or craniotomy	*	*	Yes	Yes	Yes
Convulsive disorder					
Well controlled	Yes	Yes	Yes	Yes	Yes
Poorly controlled *Needs individual assessment †No swimming or weight lifting ‡No archery or riflery	No	No	Yes†	Yes	Yes‡
Ovary: Absence of one	Yes	Yes	Yes	Yes	Yes
Respiratory					
Pulmonary insufficiency	*	*	*	*	Yes
Asthma *May be allowed to compete if oxygenation remains satisfactory during a graded stress test	Yes	Yes	Yes	Yes	Yes
Sickle cell trait	Yes	Yes	Yes	Yes	Yes
Skin: Boils, herpes, impetigo, scabies *No gymnastics with mats, martial arts, wrestling, or contact sports until not contagious	*	*	Yes	Yes	Yes
Spleen: Enlarged	No	No	No	Yes	Yes
Testicle: Absence or undescended *Certain sports may require protective cup.[3]	Yes*	Yes*	Yes	Yes	Yes

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CLASSIFICATION OF SPORTS

		Noncontact		
Contact/Collision	*Limited Contact/Impact*	*Strenuous*	*Moderately Strenuous*	*Nonstrenuous*
Boxing	Baseball	Aerobic dancing	Badminton	Archery
Field hockey	Basketball	Crew	Curling	Golf
Football	Bicycling	Fencing	Table tennis	Riflery
Ice hockey	Diving	Field		
Lacrosse	Field	Discus		
Martial arts	High jump	Javelin		
Rodeo	Pole vault	Shot put		
Soccer	Gymnastics	Running		
Wrestling	Horseback riding	Swimming		
	Skating	Tennis		
	Ice	Track		
	Roller	Weight lifting		
	Skiing			
	Cross-country			
	Downhill			
	Water			
	Softball			
	Squash, handball			
	Volleyball			

Figure. Classification of sports. Reprinted with permission from American Academy of Pediatrics Committee on Sports Medicine. Recommendations for participating in competitive sports. Pediatrics 1988;81:737-9.



THE PRESIDENT'S PAGE

J. ELMER NIX, M.D.

Thoughts On Quality, Access, And Expenditures

For the past few years Congress has been studying health care in the United States and it has been primarily interested in quality, access, and costs. It is generally accepted that the quality of health care in the United States is satisfactory, though many are asking that physicians take periodic recertification examinations. If an examination can be developed that truly measures compentence and competent performance, I will have no quarrel with that recertifying examination — however, I don't think that lofty goal has been reached yet.

Access to health care is probably better today than ever before but we do still have some 31 million Americans who are underinsured and uninsured — a problem we must solve. We also still have some problem with access to care in center city areas, and some rural areas. Congress and the Physician Payment Review Commission are attempting to alleviate the access problem by increasing fees paid to physicians in these underserved areas and by increasing fees for primary care physicians as opposed to surgeons. These are laudable actions, even in this surgeon's opinion.

The major thrust of Congress has been toward the study of health care costs, which Congress believes are far too expensive. Congress and others (probably "they"), think it terrible that we spend 11.5% of our gross national product on health care; but is there anything inherently wrong with the American public choosing to spend its money on better health — if it places a high value on good health? Most Americans do not see anything wrong with spending 12-14% of our GNP on health care. Congress now wants to reduce spending on health care and is attempting to do so through price controls, a la RBRVS, DRG's, MAAC's, MVPS, "overvalued procedures," banning of balance billing, denial of payments, refusal to pay Medicare bills for less than $5, etc.

Price controls have not worked in the United States and they will not provide a solution to today's health care costs. We must depend on logic, and not resort to legislation. Medical care is expensive — so are higher education, legal fees, luxury automobiles, gasoline and apartments in Washington, D.C. The price

(Continued on page 379)

EDITORIALS

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NOVEMBER 1990

Rejoice, Dear Hearts!

At a recent board meeting of the Mississippi Foundation for Medical Care we were addressed by Mr. Clarence Boone, Regional Administrator of Health Standards and Quality for the Health Care Financing Administration. You could tell right off that he was a confirmed bureaucrat. The thing he said that impressed me most was the fact that this year the government would spend one billion dollars to support the bureaucracy of the peer review organization . . . universal. I was overwhelmed by the fact that the Atlanta-based eight state district would spend $50 million and that Mississippi alone would spend $11 million over a three year period. I asked him the obvious question. "Are we really 'saving' our patients (Taxpayers) any money?" He spent fifteen minutes explaining how difficult it was to equate quality of care improvement and outcome of care with actual cost savings. He hedged on me and never did come right out with a "yes" or "no." I believe that you and I could give him the right answer without explanation or hesitation!

I was also duly impressed with Mr. Boone's commitment and how certain he was that the peer review business would expand. No doubt about it, it is BIG business and a self-sustaining one at that.

With In-Office Review beginning in early 1991 it would seem only reasonable to assume that the PRO business is destined to "save" the taxpayers considerably more money. I also asked him if he thought that doctors would ever be able to do their own peer review without government intervention. You know his answer for that.

Mr. Boone was most impressed with the Mississippi Foundation for Medical Care peer review organization. In fact, mention was made that we did such a good job here in Mississippi that we had a real turnover of personnel from his office reviewing us because we "trained" them so well. I'm not sure but I think that was a compliment.

I know you thought that I would say something real detrimental or inflammatory in this editorial in view of the topic covered, but I am just gonna "Cool" it and try to keep peace in the family — for now.

Well, either way, it surely is fun being a physician and I thank God for having let me be one.

Joe Johnston, M.D.
Associate Editor

LETTERS

To the Editors:

In his article entitled "Medicine and Money in Mississippi" in the August, 1990, issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, Dr. Elmer Nix appropriately emphasizes the importance of minimizing the drain of health care dollars from our state's economy. We agree that physician referrals to out of state medical facilities should be avoided whenever possible.

On another front, a growing segment of Mississippi's money is being diverted out of the state by mail order prescription operations. Like Dr. Nix, we are concerned about the quality of care as well as the economic implications of this phenomenon. Many have been led to believe that significant savings could be realized through mail order prescription plans without adversely affecting the quality of pharmaceutical services received. However, evidence now suggests that the mail order promoters are wrong on both counts.

Costs

1) Two separate studies sponsored by PCS, Inc., a national prescription program management company, determined that mail order pro-

grams were actually more costly than programs utilizing traditional pharmacy providers.

2) The employee benefits manager for the General Motors Corporation, Mr. Beach Hall, has publicly acknowledged that, after five years of experience, GM has realized no savings from their mail order prescription program.
3) A study sponsored by the federal government's Health Care Financing Administration determined that mail order prescriptions cost *two cents* per day less than those provided by community pharmacies.

Quality of Pharmaceutical Services

As community pharmacists, we take pride in the quality and variety of value-added services we provide to our patients. These include:

1) Professional, personal advice and counseling on the safe and effective use of both prescription and non-prescription medications with monitoring for interactions, allergies, contraindications, and patient compliance.
2) Complete prescription and non-prescription medications when needed. (Mail order caters primarily to maintenance drug therapy.)
3) Information on health care needs. Many conditions can be safely and effectively treated with less expensive non-prescription drugs. On the other hand, we often urge patients to seek immediate medical care when, left to their own means, the patient may have delayed and allowed the condition to worsen or may never have sought care at all.
4) Pharmacy practices consistent with Mississippi's laws and regulations. (Most mail order operations locate in states with more liberal laws and regulations, particularly those concerning generic substitution.)
5) Prompt and knowledgeable service.
6) Convenient location.
7) After hours emergency service.

Having pride in the services community pharmacists provide, we could go on. However, the most convincing evidence of the value of our services is provided by the ultimate judge — our patients.

Consumer Attitudes

A recent Gallup poll found that 52% of consumers surveyed believed that the advice they had received from their pharmacist had helped them save money on health care. And 18% felt that they had saved a great deal.

In another consumer survey, three of community pharmacy's strongest points in comparison to mail order — location, prompt and knowledgeable service, and the pharmacist's qualities and character — placed among the four most important factors in selecting a pharmacy.

Summary

Mail order plans DO NOT generate significant savings. Mail order plans DO compromise the quality and availability of pharmacy services and they DO adversely affect Mississippi's economy.

Dr. Nix encourages the provision of the highest quality of care while reminding us that "we must not forget our social and economic obligations to our friends, neighbors, and all fellow Mississippians." Mississippi's pharmacists are compelled to respond with a hearty "Amen, brother!"

Sincerely,

Phylliss M. Moret, R.Ph.
Executive Director

Michael L. Kelly, R.Ph.
Director, Drug Utilization

Medico-Legal Brief

Court Requires Clear Evidence of Patient's Wishes

A state may require that an incompetent patient's wishes about withdrawal of life-sustaining treatment be proved by clear and convincing evidence, a 5-4 majority of the U.S. Supreme Court ruled.

The now 32-year-old patient has been in a persistent vegetative state for over seven years. She suffered severe injuries in an automobile accident on January 11, 1983. She is in a state hospital and has virtually no chance of regaining her mental faculties. The state bears the cost of her care. Her parents asked hospital employees to terminate artificial nutrition and hydration procedures. They refused, and the parents obtained a court order permitting termination of life-sustaining treatment.

On appeal, the Missouri Supreme Court reversed. The court recognized a right to refuse treatment and said that the Missouri Living Will statute embodied a state policy strongly favoring the preservation of life. The court said that statements by the patient to her roommate that she would not wish to continue her life unless she could live at least halfway normally were unreliable for the purpose of determining her intent. The court said that no person can assume the choice of terminating medical treatment

unless the formalities of the Living Will statute were complied with or there were clear and convincing evidence.

The U.S. Supreme Court granted certiorari to consider whether the patient had a right under the U.S. Constitution which would require the hospital to withdraw life-sustaining treatment from her. The court viewed the Missouri requirement of clear and convincing evidence as a procedural safeguard to assure that any action taken on behalf of an incompetent conformed to the wishes of the patient as expressed while the patient was competent. The court said that the clear and convincing evidence standard was an appropriate standard when the interests at stake were both particularly important and more substantial than loss of money. The state was entitled to guard again potential abuses by surrogates who may not act to protect the patient. The court said that the state could permissibly place the increased risk of an erroneous decision on those seeking to terminate life-sustaining treatment. An erroneous decision not to terminate resulted in maintaining the status quo. An erroneous decision to withdraw such treatment was not susceptible of correction. A decision not to terminate life-support may be corrected in the future by advancements in medical science or by the patient's death, the court said.

The state supreme court did not commit constitutional error in concluding that the evidence did not amount to clear and convincing proof of the patient's desire to have hydration and nutrition withdrawn. The court added that the state did not have to accept the substituted judgment of close family members in the absence of substantial proof that their views reflected those of the patient. The state supreme court's decision was affirmed. Four of the nine justices dissented. — *Cruzan v. Director, Missouri Department of Health,* No. 88-1503 (U.S. Sup.Ct., June 25, 1990)

PRESIDENT'S PAGE

(Continued from page 376)

controls on medicine that are being currently advocated, are legislative, not logical solutions.

As physicians, we must cooperate with others in seeking solutions to our economic problems in the health industry. We particularly should engage in dialogue with the American Association of Retired Persons, an organization of 30 million voters, with whom we have so much in common (health care for the elderly); and yet, the AMA and the AARP so often seem to be on opposite sides of the fence. We must improve our relations with with AARP and we must enter into discussions with business groups and industry, who are suffering from the high cost of health care. Doctors must be participants in making decisions about all health care issues, including physician reimbursement and the total cost of health care. In order to determine the costs of health care, we must first define "health care." Today, many social services are included in the term "health care" and these services certainly add significantly to the cost of "health care." In what other country do so many health dollars go toward:

1. Professional liability insurance
2. Medico-legal experts
3. Health care advertising
4. Utilization review managers
5. Lift chairs for the elderly
6. Cosmetic surgery
7. Medical care needed because of unhealthy life styles
8. Air conditioners for patients with respiratory diseases
9. Expensive exercise equipment such as rowing machine, treadmill, etc.?

These non-medical components of our health care costs must be identified and excluded if we want a true picture of our health care costs.

Of course, we must continue to explore solutions with our elected and appointed officials. However, it is difficult to maintain the level of trust and respect necessary for fruitful discussions, when federal officials act in the manner displayed by Richard Kusserow, Inspector General of the Department of Health and Human Services, when he recently appeared on the television show "Prime Time." Mr. Kusserow lost his credibility through his reckless statements, his ignorance of fact, his vindictive demeanor and his recklessness. Mr. Kusserow appears to have lost his sense of fair play and he demonstrated this to the American television audience.

As your President, I have written to Senator Thad Cochran asking that Mr. Kusserow be removed from office. The American public deserves better than Mr. Kusserow. Perhaps his replacement will be a "kinder and gentler" person with whom one can sit down at the table and talk.

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AMA Delegates Report

SIDNEY O. GRAVES, M.D.
Natchez, Mississippi

With this issue of the Journal, a new service is being provided for the MSMA membership. It will be known as the American Medical Association Delegate Report. Each month, a different member of the delegation will provide a report on activities of the AMA that serve the interests of the medical profession and the public.

Let me start by saying that every member of the Mississippi State Medical Association should make an effort to attend and observe the activities of a meeting of the American Medical Association. The policy of the association is established at this meeting. There are two meetings each year. The Annual Meeting is always held in Chicago, the third week in June and runs Saturday through Thursday. The Interim Meeting is held at various sites throughout the country, the first week in December. Let me lead you through a very abbreviated five days at a typical AMA meeting held in Chicago.

Day 1. Friday. Because of various commitments associated with the meeting, the delegation usually arrives on Friday. A prime function this day is the Organization of State Medical Association Presidents meeting. This group is composed of both past and incumbent presidents of the 54 state and territorial medical associations. It provides a great opportunity to share experiences and information with colleagues across the country in addition to hearing a superb program dealing with timely health care issues. Additionally, several section and ancillary meetings begin on Friday.

Day 2. Saturday. The ancillary and section meetings continue. The following sections meet throughout the day: Medical School, Medical Student, Resident Physicians, Hospital Medical Staff and Young Physicians. The Council on Legislation meets (Dr. Ed Hill was recently appointed to this prestigious group) and also, the Board of Directors of the Southeastern Coalition States conducts their initial meeting. Members of our delegation are assigned to monitor each of these meetings.

Day 3. Sunday. This day begins early, at 7:00 a.m., with the Southeastern Coalition breakfast. This is a group of thirteen states that are bound together both politically and socially. We consider problems that are common to our geographic section and conduct interviews with candidates who are running for AMA office. Candidates for office could be the subject of an entire article, so I will not get into that at this time. The House of Delegates convenes at 2:00 p.m. This is a very impressive ceremony that would have to be viewed to be fully appreciated. There are usually remarks by several distinguished guests.

Day 4. Monday. Resolutions and AMA reports are handled by nine Reference Committees. At the recent June meeting, there were over 100 reports and 275 resolutions to be considered. The Committees function as an open forum where all reports and resolutions are discussed and debated in detail. It is not necessary to be a delegate to attend a Reference Committee hearing and any member of the American Medical Association is free to speak. There are some very interesting and informative debates occurring at these meetings. At the conclusion, the respective committees go into closed session and prepare their recommendations on each report and resolution. All of these reports must be ready by 6:00 a.m. on Tuesday.

Days 5-7. Tuesday, Wednesday and Thursday. The House of Delegates reconvenes at 9:00 a.m. The respective Reference Committees each take their turn reporting to the House. The Chairman reads the resolution, or report, and gives the Committee's recommendations. Fortunately, reports and resolutions that are similar can be combined. It is then necessary for the House of Delegates to vote on each and every report. It can be accepted, rejected, amended, filed or referred to the AMA Board of Trustees for action. The meeting is not adjourned until all resolutions and reports have been handled in one of the above mentioned ways.

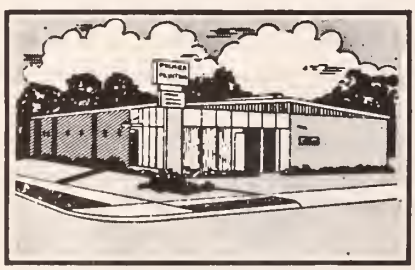
As far as our Delegation is concerned, we caucus continuously throughout the meeting. We meet Monday, Tuesday, Wednesday, and Thursday mornings at 7:00 a.m. to discuss and refine our position on each report and resolution and the recommendations of the Reference Committees.

In addition to the meetings in Chicago, we meet four to six weeks after the convention to review our accomplishments, or lack thereof. We also meet for an entire day approximately 7-14 days prior to the AMA meeting for the purpose of reviewing the agenda and becoming familiar with the items that will be discussed and acted upon.

As I said at the beginning, everyone should attend at least one AMA meeting. As Delegates, we all would be delighted to serve as your hosts and try to explain how the "House of Medicine" functions. It is an interesting gathering and an impressive demonstration of democracy in action.

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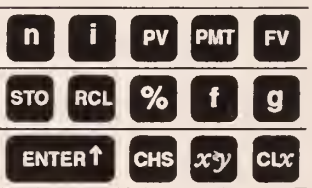
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Health Fair Held In Kosciusko

Fairgoers on Wednesday, September 19, had the opportunity to participate in a health fair, "a first" for the Central Mississippi Fair.

The successful event was a project of the Health and Human Resources Committee of the Kosciusko-Attala Chamber of Commerce with Dr. Stanley Hartness serving as chairman. Services offered to Fairgoers included glaucoma screening, vision testing, blood sugar, cholesterol, triglyceride and blood pressure checks. All checks were provided at no charge and participants were able to get results before leaving the coliseum where the health fair was set up.

There was also a medical exhibit featuring memorabilia from the offices of the late Dr. Emmett Ray, Dr. Lamar Bailey, and Dr. McBryde. Included were pieces of equipment, medical books and instruments.

Dr. George Abraham II, and Staff Present Workshop

Family Physician, George E. Abraham, II, M.D., Melissa McCaa, R.N., Family Medicine Nurse and Miriam Jabour, Marketing Director of The Vicksburg Family Medicine Clinic presented a workshop, "Make Patient Education Really Pay For Your Practice" at The 12th Annual Conference on Patient Education. The Westin Crown Center in Kansas City, Missouri was the site for this Conference emphasizing practical information and skills, interdisciplinary interaction and team development in patient education programs.

This Conference, sponsored annually by The Society of Teachers of Family Medicine and The American Academy of Family Physicians, is attended by family physicians, psychologists, faculty and students from various family medicine residency programs in the United States and Canada, nurse educators and others involved in some aspect of patient education. This year's theme, "Patient Education Investing for Rewards" was apparent in 21 workshop topics offered to the attendees.

Dr. Abraham received his medical degree from The University of Mississippi School of Medicine and completed his Residency at The University of Mississippi Medical Center in Jackson. He is a Board Certified Family Physician with A Certificate of Added Qualifications in Geriatric Medicine. He is a member of The American Academy of Family Physicians, The West Mississippi Medical Society and The Mississippi Foundation for Medical Care. He was a co-recipient of The 1989 *Patient Care* Award for Excellence in Patient Education with Doctors Sandra F. Burford, Lee Giffin and Hildon H. Sessums, Jr., also in practice at The Family Medicine Clinic. As Family Medicine Nurse, Melissa McCaa, R.N., co-ordinates the Patient Education Program at The Vicksburg Family Medicine Clinic. She attended Millsaps College and received her nursing diploma from St. Dominics School of Nursing in Jackson. She has been employed with The Vicksburg Family Medicine Clinic for the past three years as Family Medicine Nurse.

Miriam Jabour received her bachelor's degree in Marketing from Southern Methodist University in Dallas, Texas and has been employed as Marketing Director for The Vicksburg Family Medicine Clinic for the past four years. She co-ordinated the workshop materials and preparation as well as authored the manuscript which appeared in the publication distributed in conjunction with the actual workshops. She is also a Senior Consultant with the marketing firm, Medical Marketing Unlimited.

Stingily Installed As MS AFP President

Dr. James R. Stingily of Hazlehurst was installed as president of the Mississippi Academy of Family Physicians at its recent scientific meeting. A native of Vicksburg, Stingily has been in private practice in Hazlehurst for 30 years and is a past chief of staff at Hardy Wilson Memorial Hospital of which he is still on staff.

Dr. Stingily did his premedical studies at Mississippi College and received his business and M.D. degrees from the University of Mississippi. He has served as assistant clinical professor in Family Medicine since 1977 and has been a preceptor for second and third year medical students for over 15 years.

His other MAFP offices include director, secretary-treasurer, vice president and president-elect. Dr. Stingily also takes a very active interest in community affairs having served as chairman of the Board of Deacons of Hazlehurst First Baptist Church, as past president of the Hazlehurst Chamber of Commerce and committee member for the Copiah Water Works.

Married to the former Margaret Vance, the Stingily's have three children,Rebecca Stingily Wasson and Sharon Stingily, both of Memphis, and James Ray Stingily II, a student at Mississippi College.

William Billington, M.D. Develops Salt Substitute

Dr. William Billington, a family practitioner, from West Point, MS has developed "SmartSalt," a salt, sodium and cholesterol-free product now available at local drug stores.

"My patients were having a hard time staying on a salt-free diet and there just wasn't any product out there to help them," said Dr. Billington. He began experimenting with different spices and seasonings until he concocted a product that he said has a salty taste but none of salt's bad features.

SmartSalt has been on the market for about a year and is currently available only in Mississippi and parts of Alabama. Dr. Billington used the Food and Fiber Department of Mississippi State University for assistance on getting federal Food and Drug Administration approval for the SmartSalt product. He eventually plans to market SmartSalt nationwide.

NEW MEMBERS

Berger, Allen, Greenville. Born Brooklyn, New York, May 3, 1957; M.D. State University of New York at Buffalo School of Medicine, Buffalo, New York 1981; one year internship Jewish Hospital of St. Louis, St. Louis, MO; anesthesiology residency Parkland Memorial Hospital, Dallas TX, 1984-86; fellowship Henrietta Eggleston Hospital, Atlanta, GA, one year; elected by Delta Medical Society.

DEATHS

Farr, A. Lewis, Greenville. Born Edwards, MS, November 30, 1919; M.D. Washington University School of Medicine, St. Louis, MO, 1947; interned one year Barnes Hospital, St. Louis, MO; medicine residency Barnes Hospital, St. Louis, MO, and Washington University Hospital, St. Louis, MO; died September 28, 1970, age 70.

Hicks, G. Swink, Natchez. Born Stanton, TN, April 6, 1910; M.D. University of Tennessee College of Medicine, Memphis, TN, 1934; interned one year St. Joseph's Hospital, Memphis, TN; surgery residency St. Luke's Hospital, New York City, NY 7/37-1/38 and Stanford Hospital, Stanford, CT 1/38-7/40; elected by Homochitto Valley Medical Society; Past President of Mississippi State Medical Association; died September 15, 1990, age 80.



Where there's smoke...there may be bronchitis



"Recent research has delineated early, more subtle changes in lung and immune functions. These alterations directly predispose smokers to respiratory tract infection."

Am Fam Phys 1987;36:133-140

Ceclor® Pulvules® 250 mg
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Established therapy for today's patients

For respiratory tract infections due to susceptible strains of indicated organisms

Brief Summary.
Consult the package literature for prescribing information.
Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins.
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of **serum-sickness-like** reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, **serum-sickness-like** reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis, and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other, eosinophilia 2%, genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis, elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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PERSONALS

(Editorial Note: The following announcement from the October "Personals" Section is being reprinted for correction.)

William M. Aden, M.D. has associated with W. Boyce Craig, O.D., and Professional Eye Care Associates, Diseases and Surgery of the Eyes.

Brett L. Arron of Jackson announces the opening of his office for the practice of Anesthesiology.

The Tunica Medical Group, Inc. **Rodney Baine, G. D. Berryhill, Jr.,** and **Andrea L. Smith** all of Clarksdale, and **Timothy H. Lamb,** and **Travis W. Yates** both of Lyon, announce their association for the practice of medicine and surgery in the Professional Office Building adjacent to the Tunica County Hospital.

Michael S. Ballentine has joined the medical staff of Woman's Clinic P.A., Obstetrics-Gynecology of Clarksdale with **Frank T. Marascalco, Henry McCory, Bouldin A. Marley** and **Charles D. Cesare.**

Ed D. Barham of Clinton was named as a fellow of the American College of Radiology, during ceremonies at the ACR annual meeting held in Nashville, TN.

Bert D. Bradford of Brookhaven has joined the staff at South Central Regional Medical Center and the Laurel Pediatric Clinic. He is a Fellow of the American Academy of Pediatrics and serves as the vice president of the Mississippi Chapter.

E. E. Bramlitt, Bruce Bullwinkel, and **David Williams** all of New Albany have completed a workshop on laser surgery. Bramlitt and Bullwinkel are now fully certified in laser surgery to perform laparoscopic cholecystectomy and Williams is fully certified in OB-GYN procedures using laser surgery.

Donna Breeland of Jackson announces her association with LeFleur OB-GYN Associates, P.A. for the practice of obstetrics and gynecology.

James D. Cady, Jr. of Jackson has associated with Rush Medical Groups, P.A. of Meridian for the practice of family medicine.

Rickey L. Chance has associated with Laurel Family Clinic, P.A. in the practice of family medicine.

Kent A. Darsey of Meridian announces his association with Meridian Family Practice and Occupational Medical Clinic in the practice of family medicine.

Terri O. Dyess has affiliated with Jeff Anderson Regional Medical Center as Medical Director of Jeff Anderson Health and Fitness Center and Anderson's Institute for Rehabilitative Medicine.

Howard Freeman of Jackson spoke to the Family Practice Physicians of the Kosciusko area on the Subject "Recognition and Treatment of Depression."

Gordon Gaethe, a pathologist from Jackson, TN, has joined the staff of Ocean Springs Hospital.

Margaret M. Glynn of Vicksburg has joined the Segars Clinic in Iuka for the practice of pediatrics and general medicine.

Walter Gough of Drew was recently appointed district #12 delegate for the Christian Medical & Dental Society.

John R. Harper of Taylorsville was recertified by the American Board of Family Practice.

J. Edward Hill of Hollandale has been honored as the Family Physician of the Year by the Mississippi Academy of Family Physicians.

Michael J. Johns of Corinth announces the opening of his new office on Alcorn Drive, Magnolia Doctors Plaza 108, in Corinth for the practice of general vascular and thoracic surgery.

Robert L. Jordan of Meridian announces his association with the Meridian Family Practice and Occupational Medical Clinic for the practice of family medicine.

A BRIGHT IDEA... IN MILD TO MODERATE HYPERTENSION

180-mg Calan SR...once-daily, single-agent therapy

- Efficacy proven comparable to 240 mg[1]
- 24-hour control with once-daily dosing[1]*
- Low-dose, well-tolerated† therapy[1]

A more economical choice‡



ONCE DAILY **180 mg**

Calan® SR

Verapamil HCl 180 mg

SUSTAINED-RELEASE **CAPLETS**

*Total daily dosages above 240 mg should be administered in divided doses. Calan SR should be administered with food.

†Constipation, which is easily managed in most patients, is the most commonly reported side effect of Calan SR.

‡Price comparison versus 240-mg Calan SR.

Please see next page of this advertisement for references and a brief summary of prescribing information.

SEARLE

Consistent with 1988 JNC recommendation...

The 1988 report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure recommends that blood pressure be controlled "...with the fewest drugs at their lowest dose...."[2]



When you want high single-agent efficacy in a lower dose, prescribe...

ONCE DAILY **180 mg**

Calan® SR

verapamil HCl 180 mg

SUSTAINED-RELEASE CAPLETS

A BRIGHT IDEA
in verapamil SR therapy

References:
1. Data on file, G.D. Searle & Co. **2.** 1988 Joint National Committee: The 1988 report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 1988;148:1023-1038.

BRIEF SUMMARY

Contraindications: Severe LV dysfunction (see *Warnings*), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

Warnings: Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

Precautions: Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol clearance may occur with combined use. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digitoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

Adverse Reactions: Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°,2°,3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecomastia, increased urination, spotty menstruation, impotence.

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Adron Keith Lay, of Bay Springs has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Henry Lynch, of Rolling Fork announced his retirement after 30 years of service to the Sharkey-Issaquena area. He will continue to be on emergency call at the Sharkey-Issaquena Hospital in Rolling Fork and his duties as Medical Director at Heritage Manor.

Richard F. McCarthy has returned to the Hattiesburg Radiology Group after completion of a fellowship in Neuroradiology at Rush-Presbyterian-St. Lukes Medical Center in Chicago, IL. McCarthy's training specifically related to diagnosis and imaging of diseases involving the brain, spinal cord, head and neck.

Beverly A. McMillian, William Sutherland, Freda McKissic Bush and **Brooks Griffin** of LeFleur OB-GYN Associates, P.A. announce the opening of a satellite office at Eastwoods Place, 3507 Lakeland Drive, Jackson.

Alfred E. McNair, Jr., of Pascagoula has been appointed Clinical Assistant Professor of Medicine at Tulane University Medical Center in New Orleans, LA. He continues his active private practice of gastroenterology and hepatology in Pascagoula, Ocean Springs, and Biloxi.

Charles J. Parkman, of Hattiesburg was recently elected president of the Mississippi Lung Association's Board of Directors at the 1990 annual meeting held in Jackson. Parkman is a pulmonary disease specialist with Hattiesburg Clinic.

Hernando Cartes Payne, of Greenville has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Daniel J. Peasley, has associated with Internal Medicine Clinic of Laurel, P.A. for the practice of Gastroenterology, 1203 Jefferson.

Jeffrey Ross, announces the formation of Brookhaven Anesthesia Associates, P.A. providing anesthesia and pain management services to patients of Kings Daughter's Hospital.

Buddy Savoie, of Jackson presented a lecture in San Francisco, CA on shoulder problems including instability, impingement and rotator cuff problems. He also lectured on elbow and wrist arthroscopy at the American Academy of Orthopaedic Surgery Summer Institute in Monterey, CA and gave instruction in knee, ankle and wrist arthroscopy at a seminar in Richmond, VA.

Lee Scott, has associated with **John D. McEachin, William B. Simmons,** and **James P. Wilson** for the practice of Pediatrics, Adolescent Medicine, and Newborn Care at Medical Arts Clinic-Pediatrics, 2115 14th Street, Meridian, MS.

Eugene E. Taylor, of Natchez was recently elected a member of the Board of Trustees of the Southern Orthopaedic Association during its 7th Annual Meeting.

Randy Voyles, of Jackson made a presentation entitled "Electrocautery is Superior to Laser" at the International Biliary Association in Hong Kong.

Reginald P. White, of Meridian announces the relocation of his practice in General Psychiatry to 5002 Highway 39 North, Meridian, MS.



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Representation, advocacy, public relations and support of professional ethics are some of the reasons MSMA exists for its members. These are the intangible but important benefits of membership which MSMA seeks to provide through member participation. There are also more tangible benefits which the association provides its members. Illustrative here are the MSMA-sponsored programs for such member needs as insurance and practice management support. These programs are listed below.

HEALTH INSURANCE

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MEDICAL MALPRACTICE INSURANCE

The Medical Assurance Company of MS (MACM) was sponsored and organized by MSMA in 1976 to provide a stable market for medical liability insurance to eligible members of the association. More than 1500 Mississippi physicians are currently insured by MACM and extensive physician leadership is involved in all phases of MACM's operations. For further information call MACM.

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Through an arrangement with the AMA Department of Practice Management, MSMA periodically conducts practice management workshops for physicians' office personnel. These workshops cover a broad range of topics from CPT-IV coding to patient surveys. For further information call Jackeye Wiebelt at MSMA Diversified Services, Inc.

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Based upon sponsorship by medical associations in many states, IC System is endorsed by MSMA to perform debt collection services for offices and clinics of member physicians. IC System has a proven national track record as a debt collection service. For further information call 1-800-443-4123, Ext. 621.

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Information Sources

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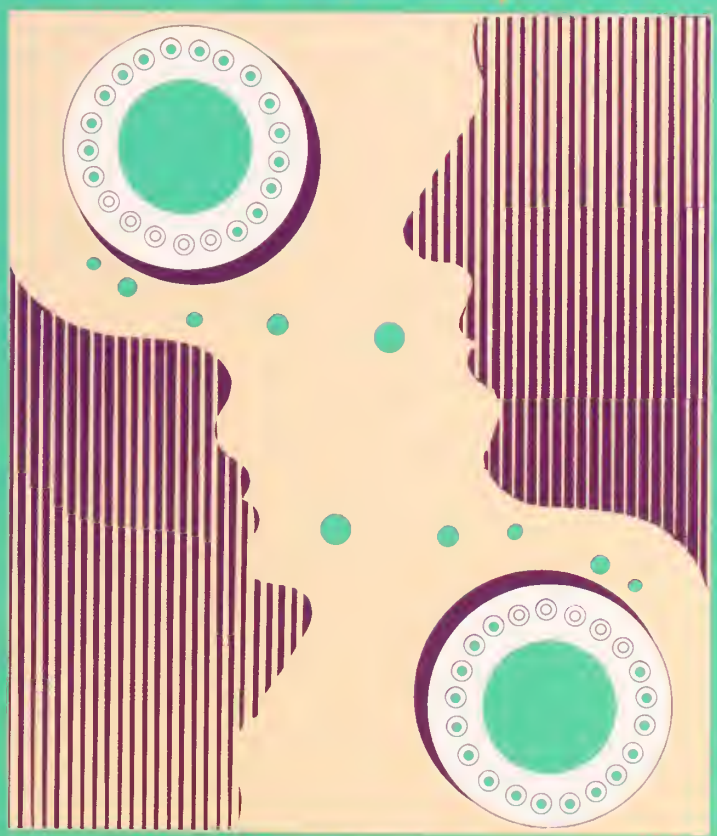
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AIR FORCE

NEWSLETTER

December 1990

Dear Doctor:

The Food and Drug Administration has approved the Haemophilus b Conjugate Vaccine manufactured by Praxis Biologicals, Inc., and distributed as HibTITER by Lederle Labs for use in infants in a three-dose immunization series at 2, 4, and 6 months of age. In the United States, Haemophilus influenza type b is the major cause of bacterial meningitis in children less than 5 years of age, with the peak incidence in children less than 1 year of age.

The Mississippi State Department of Education is seeking to implement a recommendation adopted by MSMA's House of Delegates which states "... the State Department of Education (will) refer a child failing a hearing test to any physician in the community who indicates he/she is capable of evaluating the child's hearing, such capability to include the availability of audiometric equipment and tympanometry and managing the child or referring the child if appropriate." MSMA members who wish to receive these referrals and meet the requirements for referrals should so state in writing to MSMA, P.O. Box 5229, Jackson, MS 39296-5229.

Make plans to attend the 1991 MSMA-MHA Legislative Forum and Reception to be held in Jackson on January 23. The program will include a "grassroots lobbing" seminar, an overview of the national health care scene, a luncheon address by a member of Mississippi's Congressional delegation, and a review of MSMA and MHA legislative programs for 1991.

Mark your calendar for the MSMA 123rd Annual Session to be held at the Royal d'Iberville Hotel, Biloxi, Mississippi, May 15-19,1990.

Sincerely,

Ginger Cocke

Ginger Cocke
Managing Editor

There's one simple reason why more Mississippi physicians are choosing Medical Assurance Company of Mississippi:



Medical Assurance Company Of Mississippi Board of Directors. Seated: (Left to right) Paul H. Moore, Sr., M.D., vice-president, radiologist, Pascagoula; R. Faser Triplett, M.D., president, allergist, Jackson; George Ball, M.D., secretary/treasurer, obstetrics/gynecology, Jackson.

Standing: (Left to right) Joe S. Covington, M.D., director, internist, Meridian; William A. Whitehead, M.D., director, general surgeon, Hattiesburg; James M. Cooper, M.D., director, anesthesiologist, Tupelo; Ralph L. Brock, M.D., director, family practitioner, McComb; Max L. Pharr, M.D., director, family practitioner, Jackson; John F. Lucas, Jr., M.D., director, general surgeon, Greenwood.

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DATELINE

State Awaits Federal Funds For Meningitis Vaccine

Jackson, MS - Up to 32,000 Mississippi infants risk not receiving early protection from a form of Meningitis because state health officials lack the money to buy the vaccine. The vaccine is available now from private physicians at about $26 per shot. This is the first time a vaccine has been developed to protect 2-month-old infants from bacteria-caused meningitis.

Health Center Official Warns of AIDS Spread

Starkville, MS - Mississippi may be last in some areas, but over the next 10 years it could rank among the top 10 states in number of AIDS cases, according to Dr. Robert Collins, director of the Longest Student Health Center at MSU. Information from the Center for Disease Control in Atlanta, GA. also indicates that AIDS is increasing faster in MS than other Southeastern states.

Survey: Health Costs to Double

Washington, DC - The cost of health care in the US will top $5,100 per person in the year 2000 -- more than double the price tag this year. The estimate comes from Families USA, an advocacy group for the elderly. Health care costs about $1,000 per person in 1980, the group reported. That figure has more than doubled to $2,425 this year.

Medicare Deductible Up

Washington, DC - Medicare's $592 first day hospital deductible will rise to $628 on Jan. 1. Co-payments for the 61st through 90th day of hospitalization will rise to $157, and coinsurance for the 21st through the 100th day in a skilled nursing facility to $78.50. The changes boost Medicare patients' out-of-pocket liability by about $400 million.

Parental Involvement May Help Control Childhood Obesity

Chicago, IL - Overweight children have greater long-term success controlling their weight when they have initial parental support, according to a study published in the November 21st Journal of the American Medical Association. If family-based treatment is initiated when the child is between the ages of six and 12 years, the effects can persist until young adulthood.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

Some Pitfalls of the Authoritarian Doctor-Patient Relationships in Primary Care Medicine

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Jackson, Mississippi

MEDICAL EDUCATION AND TRAINING in its efforts to promote scientific observation as its basis, often tends to perceive the patient only as host to some physical pathogen.[1] This intensive focus on pathophysiology de-emphasizes the patient and can render the physician far too authoritarian in the delivery of modern day healthcare. The physician's position as the one who is in complete charge has been implicated in the decrease of the patients' participation in their own health care. This, under some circumstances, can produce poor outcomes as well as present ethical concerns.[2]

Authoritarian Relationship

Medical literature regarding the doctor-patient relationship has supported the above contention, referring to a very common situation in which the doctor assumes an authoritarian role, while the patient takes on a submissive role.[3] This role configuration occurs, as the patient presents to the doctor in the earlier stages of an illness when alerting and distressing symptoms are first being realized.[4] Since the patient has limited scientific knowledge of his medical condition, it becomes very easy for the doctor to assume the stance of an all-controlling authority figure during this diagnostic stage.[5] It follows that the patient will assume a mainly passive and receptive role.

While some relish the position of the authority, as it merits great respect, admiration and provides immediate control, they also realize there are serious pitfalls. When the doctor allows the patient to relinquish control to an authority figure, the doctor has also relieved the patient of personal responsibility for self-care. While in some areas, such as surgery, this may be the ideal relationship, in primary care medicine it makes the doctor responsible for many patient behaviors that can only be controlled by the patient.

The patient in this role of passive recipient can manifest several reactions that may interfere with the physician's effective patient management. Three important reactions are: **resistance, over-dependence** and **the lack of appropriate self-disclosure.**

Patient resistance

When adults occupy a submissive role they often have a sense of having lost control of their life. This feeling can produce resistance or rebellion. They

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may feel they are in an adversarial relationship, perceiving the doctor as trying to take over their life and they must protect these rights or freedoms. Granted some patients may feel security in this submissive role, they are rarely fully accepting of the role.

Patient overdependence

Another consequence of the patient assuming a passive role in a relationship can be an acceptance of becoming dependent upon another. The patient has given up many rights as a person while assuming a dependent role in which they see themselves as highly reliant upon another. Reciprocally they now can begin to expect magical and miraculous things from the physician, because the doctor is an authority figure who is going to completely take care of them. They can now believe the doctor is going to offer them the same sense of security they enjoyed as children with parents who made their decisions. What physician has not unintentionally placed him/herself in such an untenable predicament?

Patient lack of self-disclosure

A third effect of assuming the submissive role in a relationship is the resistance to being open and honest. The patients can believe that telling personal secrets will cost respect, or being fully honest could damage the relationship. Patients become unable to tell the doctor the private areas of themselves because they fear if found-out, the doctor may not continue to be their parent-figure, nor keep the implied contract to take care of them. This is not a reciprocal relationship in which they can share their fears with another who is understanding and caring. Instead it is a patronizing relationship in which patients believe the doctor might become conditional. Then, as those in charge are prone to do, he/she might not be as responsive to them.

There are other adverse side effects of the authoritarian relationship. The three above, alone, can interfere in the development of a viable doctor-patient relationship and can complicate the physician's provision of health-care.

Reciprocal Relationship: An Ideal Model

The doctor's alternative to this authoritarian role with a passive patient can be a reciprocal or mutually participative relationship.[3] In this relationship the doctor presents as a knowledgeable professional while maintaining the respect and confidence of a cooperating and involved patient. With the need for mutual participation and cooperation, it behooves the primary care physician to help the patient maintain as much independence as is possible. In order to accomplish this the patient must be an integral part of the total management of the illness.

It is desirable that the doctor promote self-responsibility in the patient by seeking the patient's commitment to early and consistent involvement. This is begun by including the patient in the initial diagnostic process. If the doctor does this he/she can acquire more complete information about the patient's condition.[4]

The doctor will also encourage the patient to remain active in the treatment process by involving the patient in formulating treatment plans. The patient should be fully knowledgeable of how these plans impact upon his/her condition and life situation.

Since reassurance implies power and control, the doctor will use reassurance sparingly and in an appropriate manner.[5, 6] Reassurance is always an authority tool and its use must be well understood and carefully managed in health care delivery.

The concept of the desirable doctor-patient relationship has been discussed since early medicine,[7] yet there are few quantifiable measures that permit its definition as a skill. Most physicians, particularly in primary care disciplines, develop skills in "bedside manner" intuitively without ever receiving formal interpersonal skills training, analyzing their behaviors or thinking through the specific effects on the patient. Some physicians do not develop these skills as well as others do. To give serious thought to one's practice style might be in order. We suggest that if the relationship is to be more effective between the physician and the patient it must be reciprocal with mutual participation, fully including both the doctor and patient in its process. ★★★

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Obstetrics and Gynecology Grand Rounds
Clinical Case Management XIX:

Oral Contraceptive Pills. Part II: Potential Complications and Health Benefits

G. RODNEY MEEKS, M.D.
CYNTHIA L. LASSITER, M.D.
Jackson, Mississippi

DR. MEEKS: Use of the pill has been associated in the medical and lay literature with a variety of complications and possible long-term side effects. Careful analysis of claimed harmful effects reveals many misconceptions. Many associations consist of case reports with only a few subjects demonstrating any actual association with OCP use. The complications that have received the most attention are cardiovascular disease and cancer. Cardiovascular complications will be addressed more specifically as: 1) hypertension, 2) thromboembolic disorder, 3) myocardial infarction, 4) cerebrovascular accident, and 5) headache. Breast cancer, endometrial cancer, and ovarian cancer will be addressed. Metabolic changes may also occur. Health benefits of the OCP have not received much publicity.

How common is OCP associated hypertension?

DR. LASSITER: Development of hypertension is relatively infrequent, but may occur in an acute form as well as a chronic form. The risk of hypertension is 1-5% greater for OCP users than that for nonusers. The risk increases with age, parity, and duration of use. Preexisting hypertension is often considered a relative contraindication to OCP use. Most physicians, however, will prescribe OCP for mildly to moderately hypertensive women, when this is felt to be the best contraceptive option. Close monitoring is mandatory, especially immediately after beginning OCP to insure that the new OCP user does not have a significant acute rise in blood pressure. The multiphasic formulations are not associated with significantly less frequency of blood pressure alterations.

DR. MEEKS: How does hypertension develop?

DR. LASSITER: The etiology of hypertension in OCP users remains unclear but probably involves the renin-angiotensin-aldosterone system. Blood pressure elevation dissipates, with rare exception, within 6 months of discontinuing the pill. Women who become hypertensive on OCP are not predisposed to develop pregnancy-induced hypertension (PIH) or to develop chronic hypertension and a history of PIH does not increase the risk of hypertension during subsequent OCP use. These PIH patients can take combination OCP as early as two weeks postpartum provided they are normotensive.

DR. MEEKS: Is the risk of clotting disorders increased?

DR. LASSITER: The risk of thromboembolic disease is modestly increased in women who otherwise have no underlying risk factors. Deep venous thrombosis (DVT) in the leg is four times more likely in OCP users than in nonusers and superficial thrombosis is two times greater. Varicose veins do not influence risk of DVT associated with pill use.

DR. MEEKS: What is the mechanism of increased risk of thrombosis?

DR. LASSITER: Estrogen dosage correlates directly with the incidence of thromboembolic dis-

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ease. Fewer thromboembolic events are noted in women using formulations containing 0.03 to 0.035 mg of estrogen. The increased coagulability may act synergistically with other risk factors to further increase the likelihood of thromboembolic disease. Other factors include a personal or family history of thrombophlebitis, previous thromboembolism, diabetes, recent surgery, and prolonged immobilization. No association is apparent with smoking, age, or duration of use. The risk does not persist after OCP use is terminated.

DR. MEEKS: Should women having major surgery continue OCP?

DR. LASSITER: OCP should ordinarily be discontinued at least two weeks before any elective major surgery and not reinstituted until at least two weeks afterward.

DR. MEEKS: Can women who have had a pulmonary embolus use OCP?

DR. LASSITER: Venous thrombosis with pulmonary embolus remains an absolute contraindication. These women must use an alternate form of contraception.

DR. MEEKS: Are myocardial infarctions more common in OCP users?

DR. LASSITER: Myocardial infarction (MI) is a rare complication. Overall, the risk of MI is not increased appreciably by OCP use unless additional risk factors are present such as age greater than 35, obesity, smoking, hypertension, hypercholesterolemia, or diabetes mellitus. These factors act synergistically rather than merely additively. Most strikingly, the majority of patients who have an OCP associated MI are smokers who are older than 35 years of age. No deaths from MI have been associated with OCP in women less than 25 years of age.

DR. MEEKS: Is there an association between OCP use and neurovascular accidents in healthy women?

DR. LASSITER: Retrospective studies show that pill use increases the risk of thrombotic stroke threefold and that of hemorrhagic stroke two-fold. Approximately 5-10% of OCP-related deaths are due to stroke. The additional factors of age, hypertension, and smoking increase the incidence of stroke. These statistics come from a time low-dose pills were not yet available.

DR. MEEKS: Do low-dose OCP have the same risk?

DR. LASSITER: Recent reports have shown that healthy women on low-dose pills do not have an increased risk of stroke. The overall risk is minimal in healthy women under the age of 35 and the synergistic effect of smoking appears to be negligible. Indeed, a series reports that after 9100 women years of use, not a single patient on the low-dose pills had suffered a stroke. If these data are correct, a decline in the incidence of stroke should become evident as low-dose pills become the standard.

DR. MEEKS: How does smoking impact on the risk of vascular disease?

DR. LASSITER: The evidence seems clear that the increased mortality is associated with tobacco use. Women smokers beyond age 35 must be directed to other forms of contraception because they have a significantly increased risk of death from circulatory disease. Short-term use, for example, to suppress ovarian cysts or control diagnosed dysfunctional bleeding is permissible.

DR. MEEKS: Are patients with sickle cell disease more likely to have thrombosis?

DR. LASSITER: Sickle cell disease has a strong association with thromboembolic disorders. Laboratory data suggest that progestins may protect against thrombosis. Epidemiologic data also suggest minimal, if any, increased risk of thromboemboli in women with sickle cell disease who take OCP. However, the underlying risk of stroke in sickle cell patients is 8%. Use of OCP in women with sickle cell disease thus becomes a medicolegal dilemma. Patients with sickle cell *trait* can use OCP.

DR. MEEKS: How significant are headaches?

DR. LASSITER: Headaches are a common side effect and can be caused by either estrogen or progestin. Headache is a symptom that must be taken seriously because it is a major danger signal that may precede a stroke. Differentials in evaluating this complaint include migraine headaches, vascular headaches, stroke, hypertension, tumor, or infection. Social concerns and functional disorders are also among the differential diagnoses. After ruling out the presence of concomitant disease and if the headache is clearly related to initiation of OCP, the pill should be changed to a preparation with lower estrogen and lower progestin activity. If headaches persist, OCP should be discontinued.

DR. MEEKS: Are migraines different?

DR. LASSITER: If OCP initiates migraine headaches, it should be discontinued. Known migraine sufferers may be prescribed the pill providing it does not aggravate the condition. If it does so, then it should be stopped. If the prodromal symptoms of migraine become focal, i.e., paresthesia or loss of vision, then the OCP should be stopped immediately because women whose migraine changes to a focal type are more likely to develop cerebral arterial insufficiency or thrombosis. Migraine occurring

during a pill-free week is due to estrogen withdrawal and can be avoided by reducing the estrogen content of the pill to 0.03 mg and giving 0.01 to 0.03 mg ethinyl estradiol daily during the 7 pill-free days.

DR. MEEKS: Does OCP cause breast cancer?

DR. LASSITER: Comparatively few women now older than 60 years have used the pill and women in their 50's would not have taken it early in their reproductive years. Consequently, most studies of the relationship between the pill and breast cancer have been confined to younger women whose risk is small and who make up only a small fraction of the breast cancer population. Because breast cancer has a very long latency period and primarily strikes older women, young women will have to pass through their reproductive years to see whether OCP use affects the incidence of breast cancer. Also, the dosage formulation of the pills has changed dramatically. At present, the risk of breast cancer and OCP cannot be answered.

DR. MEEKS: How does OCP use impact benign breast disease?

DR. LASSITER: The protective effect of OCP on benign breast disease should be emphasized. Women who take the pill are one-fourth as likely to develop benign breast disease as nonusers. There is a decreased risk of benign breast lesions, fibroadenomas, and fibrocystic changes in women using OCP. The risk continues to decrease with increasing duration of use and persists for up to 10 years after cessation of OCP.

DR. MEEKS: Concern has arisen over a possible association between OCP use and the development of cervical neoplasms. Is this valid?

DR. LASSITER: Women who elect to use OCP seem to have an intrinsically higher rate of cervical dysplasia than women from the same demographic group who chose alternative forms of contraception. Altered immune response secondary to OCP use has been postulated to accelerate progression of dysplasia. Women with dysplasia who used OCP for longer than six years have a higher rate of conversion to carcinoma-in-situ than did women with dysplasia who used other birth control methods. The relative risk for carcinoma-in-situ seems to increase with duration of use. These data have not been conclusive since it has been impossible to control for confounding factors such as age at first coitus, exposure to human papillomavirus, multiparity, high frequency of intercourse, multiple partners, and low socioeconomic status. Confirmed albeit isolated reports relate an increased incidence of cervical adenocarcinoma with triphasics.

DR. MEEKS: Does OCP use reduce the incidence of any cancer?

DR. LASSITER: Oral contraceptive use protects women from endometrial cancer. Women who take the pill for two years have a relative risk of endometrial cancer of 0.6 when compared with never-users and those who use it for four years have their relative risk reduced to about 0.4. The protective effect is most likely due to progestin. This beneficial effect increases with duration of use and persists for up to 15 years after discontinuing the pill.

Protection against ovarian cancer has also been documented. The relative risk is 0.5 among women who have used the pill for at least four years. Prevention of ovulation and consequently, reduced ovarian trauma and stimulation of the epithelial cells are postulated to be the reasons. The protective effect also persists after discontinuing the pill and the degree of protection is directly related to duration of use, i.e., the longer the use, the lower the risk.

DR. MEEKS: Does OCP use increase the risk of gallbladder disease?

DR. LASSITER: The pill seems to precipitate gallbladder attacks in women with previously asymptomatic disease during the first year of OCP use. There does not appear to be a direct cause and effect relationship between development of cholithiasis and OCP use, however.

DR. MEEKS: Does OCP precipitate liver disease?

DR. LASSITER: Hepatic adenoma, a rare benign tumor, is specifically associated with OCP use. The incidence is estimated to be 1/500,000-1,000,000 women, but increases to 3.4/100,000 in OCP users. Rupture of this highly vascular lesion may produce massive intraperitoneal hemorrhage. Spontaneous regression of these tumors occurs upon cessation of OCP usage and this course is advised when such a lesion is discovered. Pregnancy must be avoided as the hormonal milieu may exert a particularly stimulating effect and increase the tendency for rupture and hemorrhage.

Women of childbearing age are subject to a variety of other hepatic disorders, including hepatitis, infectious mononucleosis with abnormal liver function tests, and occasionally cirrhosis. Because estrogens used in OCP are metabolized in the liver, OCP should be avoided during active illness. In women who have recovered from hepatic disease and whose liver function tests have returned to normal, OCP may be resumed safely.

DR. MEEKS: Why do some patients develop depression?

DR. LASSITER: Depression has been reported in 5-30% of users. Depression is more common in

women with preexisting episodes of depression or premenstrual syndrome. Some evidence suggest that vitamin B_6 (pyridoxine) decreases which contributes to endogenous depression.

DR. MEEKS: How should one manage a patient who becomes depressed while using OCP?

DR. LASSITER: Depression can be managed by giving supplemental vitamin B_6 and changing to a more estrogenic formulation or an incremental progestin pill. Using an alternative method of contraception for several months may be appropriate to see if symptoms are relieved while not taking OCP. Related symptoms include irritability, lethargy, decreased libido, emotional instability, and sleep disturbances. One must remember that these subjective symptoms are difficult to assess and that other factors may be responsible. It is easy to blame the pill for symptoms that may be caused by life events or relationship stresses.

DR. MEEKS: Are there other health benefits to OCP use?

DR. LASSITER: Physicians often ignore potential benefits other than fertility control, but several important health benefits of OCP use have been established. While estrogens appear to stimulate growth of preexisting leiomyomas, low-dose OCP usage seems to have no increased risk of stimulating the growth of leiomyomas and at least one study demonstrates a protective effect. The incidence of pelvic inflammatory disease is reduced by 70% among women who have used the pill for at least one year. This reduced risk may not include chlamydial infection.

The pill also appears to lessen the risk of endometriosis, toxic shock syndrome, ectopic pregnancy, and functional ovarian cysts. In addition, the use of pills generally will regulate menstrual cycles, decrease the severity of dysmenorrhea and menorrhagia, and its resultant iron deficiency anemia. They may also decrease premenstrual symptoms.

Many noncontraceptive health benefits associated with OCP use may continue into the fifth decade of life. These include a decreased risk of endometrial and ovarian cancer (which persist after use of OCP are discontinued), and a reduced incidence of benign breast disease, functional ovarian cysts, and dysfunctional uterine bleeding. Use of OCP during the reproductive years may increase the bone density which persists postmenopausally.

DR. MEEKS: Are special considerations necessary for particular groups of women when oral contraceptives are prescribed?

DR. LASSITER: The control of seizures may be affected by oral contraceptives. Overall, no significant change in the pattern of seizures has been shown to result from pill use. However, anticonvulsants may make the pill less reliable because most anticonvulsants induce hepatic oxidative functions. This accelerates the OCP metabolism possibly decreasing contraceptive effectiveness. If a woman taking anticonvulsants wishes to use an OCP, many prescribed a 0.050 mg estrogen formulation.

DR. MEEKS: Do other medications interfere with OCP effectiveness?

DR. LASSITER: Concurrent use of certain drugs may produce interactions that decrease the effectiveness of one or both of the agents. Rifampin, phenobarbital, and dilantin have been proven to decrease the effectiveness of OCP. Some antibiotics, such as ampicillin and tetracycline, may also interfere. Patients should consider using mechanical contraception in addition to OCP during antibiotic therapy.

TABLE 1
ABSOLUTE CONTRAINDICATIONS TO USE OF THE PILL

Thromboembolic disorders
Cerebrovascular disease or coronary artery disease
Benign or malignant liver tumor/impaired liver function
Known or suspected carcinoma of the breast
Known or suspected estrogen-dependent neoplasia
Undiagnosed abnormal genital bleeding
Known or suspected pregnancy
Congenital hyperlipidemia
Smokers who are over age 35

TABLE 2
RELATIVE CONTRAINDICATIONS* REQUIRING CLINICAL JUDGMENT AND INFORMED CONSENT

Migraine headaches
Hypertension exacerbated by OCP
Elective surgery
Seizure disorders while on medications
Smoking
Obesity
Renal disease
Gallbladder disease
Gestational cholestasis
Diabetes mellitus
Sickle cell disease or sickle C disease

*Use of OCP in these situations require clinical judgment and informed consent.

DR. MEEKS: Tables 1 and 2 summarize contraindications to OCP use. The pill revolutionized contraception when it was introduced. Much publicity has been given to risk of OCP use. Unfortunately, health benefits other than contraception are not widely publicized. If one eliminates women beyond age 35 who smoke and women with multiple risk, the over-all risk of OCP use is remarkably small. Certainly if one compares all health risk to risk of pregnancy OCP can be justified in almost every situation. Pregnancy remains the single most common cause of health problems in women of reproductive age. ★★★

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Assault Rifles; Definitions, Evolutionary History and Medical Consequences

HARRY W. SEVERANCE, JR. M.D.
Jackson, Mississippi

Introduction

During the last 12 to 24 months the term "assault rifle" has burgeoned in the lay press. These weapons are now being frequently associated by the media with lethal and high morbidity injuries to increasing numbers of law enforcement officers and civilians. In response to this, questions have arisen as to the rationale of availability of these weapons as well as the medical consequences of wounds from such weapons.

This article examines the definition and evolutionary history of assault rifles and very briefly reviews the medical consequences of such weapons. The purpose of this article is not to discuss the treatment of wounds from such weapons, but to introduce them to medical personnel who have no background or knowledge of such weapons but may have some interest and clear up some of the myths surrounding these weapons.

Definitions

The classic definition of an assault rifle is as follows (See Figure 1): It is a shoulder-fired, held-held weapon, thus being a rifle. It fires an "intermediate" sized cartridge, i.e. intermediate between pistol cartridges and the cartridges used in "full size" military and hunting rifles (See Figure 2). It also is capable of selective fire, i.e. it can fire either a single shot for each pull of the trigger (semi-automatic), or can fire in a full-automatic mode, which means projectiles will be fired continuously as long as the trigger is held down or until the cartridge magazine runs out.[1] Some of these weapons also have a "burst" setting which allows for a certain preselected number of cartridges to be fired with each single pull of the trigger.

Figure 1

ASSAULT RIFLES

Definition

- shoulder-fired firearms
- selective fire
- intermediate-sized cartridge

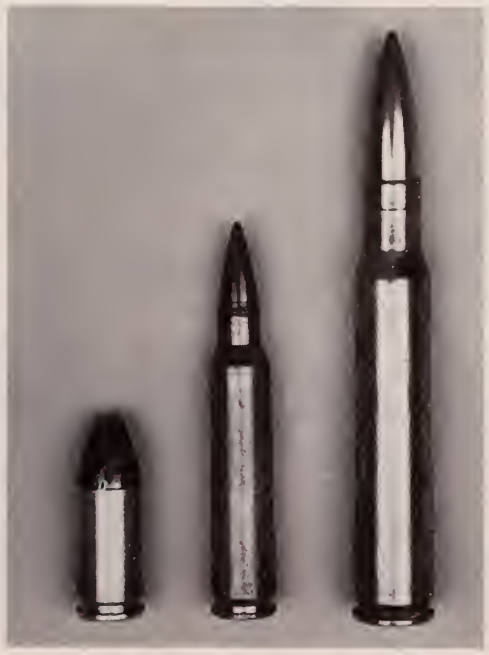


Figure 2. Cartridge Sizes

Left to Right: pistol cartridge (9mm Lugar); intermediate-size cartridge (5.56mm M-16); full-size military service cartridge(.30-06 Garand)

From the Department of Medicine, Division of Emergency Medicine, University Medical Center, Jackson, MS.

By use of this classic definition it is important to realize that weapons referred to in the lay press as assault rifles are often incorrectly named. Many of the weapons so incorrectly referred are in fact automatic pistols (often called machine pistols) as they fire pistol-size cartridges. By way of example, some names of automatic pistols (AP's) often seen in the lay press are: Uzi, MAC-10, MP-5, etc. AP's are actually in many cases preferred over "assault rifles" for street crime because of their small size and concealability.

The other major error in correct utilization of the "assault rifle" nomenclature concerns the true availability of such weapons. Selective-fire weapons are for general purposes unavailable through legal means to private citizens in the United States. The special federal permits required for private citizen possession of such weapons make this so. The weapons that are legally available under current law to private citizens for purchase at retail stores are semi-automatic "look-alike" weapons, thus can fire only one shot per pull of the trigger. Such weapons are more correctly referred to as semi-automatic rifles (SAR's), or if firing pistol cartridges; semi-automatic pistols (SAP's) (see Figure 3). Recent federal legislation has made some of these semi-automatic "look-alike" weapons less available to the public by restricting import, production or sales. Some states have banned or restricted sales of these semi-automatic weapons.

History of the Assault Rifle

Technically speaking the first assault rifle by definition was a weapon designed by Federov in 1912 and adopted by the Russian army in 1916 as the Federov Avtomat (FA-16).[1,2] Interestingly, it fired



Figure 3. Semi-automatic "look-alike" rifles and pistols

Top to Bottom: MAC-10 (S.A.P. version of MAC-10 A.P.); AKS (S.A.R. version of AK-47); AR-15 (S.A.R. version of M-16)

a Japanese 6.5mm × 50mm cartridge (See Figure 4) saw only limited use and was eventually lost in obscurity.



Figure 4. Intermediate-size cartridges for assault rifles

From Left to Right:
Group 1 (currently active cartridges)
7.62 × 51mm NATO
5.56 × 45mm M-16
7.62 × 39mm AK-47
Group 2 (obsolete cartridges)
7.92 × 33mm MP-43/StG-44
6.50 × 50mm FA-16

The design principles of current assault rifles grew out of the aftermath of the first world war. German military designers after studying data collected during the war, realized that overwhelmingly most opponents were shot within a 400 meter range rather than at extreme distance as previously thought.[2] Also, targets were most often available during assaults or other close action making a full-automatic weapon more advantageous. Their rationale was, therefore to develop a weapon that functioned and could be aimed as a full-size rifle but would use an intermediate rifle cartridge that had good ballistic principles out to a maximum of 500-600 meters.[2] The advantage of a smaller, lighter cartridge was that more could be carried by each soldier. Since further fields of fire were by their data, not necessary, they felt the increased accuracy at longer distances of larger cartridges not necessary for this new weapon. Such a change in philosophy also allowed the designers to shorten both the barrel and bolt-carrier/receiver lengths of such weapons to karabiner (carbine) length, resulting in a weapon lighter and easier to carry.[2, 3] The shorter, less powerful cartridge also would allow the weapon to be fired in a sustained full-automatic mode without the uncontrollable vibrations produced by full-size cartridges when fired in this manner.[2] At that time there was no such weapon currently available. Many countries had experimented previously with producing full automatic rifles utilizing standard full-size military service cartridges. All were failures because the combination of a high powered cartridge and a long bolt carrier/receiver mechanism made the weapons un-aimable and dangerous due to the severe vibrations during full automatic fire. Also, currently available machine guns were much too heavy to be carried and shoulder fired by individual soldiers. Machine pistols, which had appeared by the end of the war fired in a full-automatic mode but were inaccurate at any distance beyond a few feet.

Therefore, the German General Staff in the 1930's commissioned two companies (Walther and Haenel) to design and produce a prototype weapon utilizing an intermediate-size cartridge. The prototype eventually accepted by actual combat trials in the early 1940's was the MkB-42(H) (maschinen-Karabiner-1942, Haenel version) designed in part by Hugo Schmeisser and fired a new 7.92mm × 33mm cartridge, (see Figure 3). However when presented to Chancellor Hitler, he vetoed the project, supposedly based on his experiences as a rifleman in the trenches of the first world war.[2, 4] Another, more practical reason was that there were at that time eight thousand million (8 millard) rounds of full-size 7.92mm × 57mm (8mm Mauser) ammunition in stock and this new rifle used the new 7.92mm × 33mm (kurtz) cartridge.[4] However, the General Staff realizing the need for the weapon, adopted subterfuge. They renamed the weapon the MP-43 (machine pistol, 1943) and had it placed into full-scale production. It achieved such success and was in such demand on the eastern front where it was introduced, supply could not keep up with demand. After the weapon's success was assured, the General Staff reintroduced the weapon to Hitler by issuing them to his personal bodyguards.[2, 4] It is said that upon realizing his mistake and in a face-saving move immediately adopted the weapon formally and ordered the name of the weapon changed. He renamed it the StG-44 (Sturmgeweher, 1944).[2, 3, 4] In German, geweher is the word for rifle and sturm (storm) in this context means to assault. Thus the word assault rifle was coined by no less a notorious figure than Adolf Hitler himself. (Perhaps this by itself is enough to give the term bad press.)

The weapon might have drifted into obscurity at the end of World War II, such as the fate of the previously mentioned Federov Avtomat, if not for

the Russian army. They had recognized the advantages of such a weapon over that of their own machine pistols. Therefore they commissioned Mikhail Kalashnikov, a Russian tank commander and weapons designer, to develop a StG-44 style weapon that could be mass produced in large numbers with Russian production techniques.[2] This was not easy as Russian factories were not capable of the finish and high tolerances of the StG-44. Therefore, Kalashnikov produced a simplified weapon that could be produced in large numbers in simply equipped factories. The weapon had very loose tolerances, but worked well and fired a 7.62 × 39mm intermediate cartridge (See Figure 4). It was adopted by the Russian military in 1947 and became designated the Avtomat Kalashnikova, 1947 or AK-47 (See Figure 5) and saw general service as early as 1951.[2, 3]



Figure 5

AK-47 Type Assault Rifle

The serendipity of this weapon was that it was the loose tolerances and simplicity of design that resulted in its become the archetypical assault rifle for guerrilla forces over much of the world. Unlike some other assault-styled weapons; notably the American M-16, requiring strict care and maintenance in order to continue to function, the AK-47 required none. Therefore, with approximately 5 minutes of training, an untrained guerrilla fighter could be issued an AK-47 and become a dangerous adversary. The weapon requires essentially no cleaning or care and has thus been adopted by guerrilla fighters the world over. Over 35 million kalashnikovs are said to have been made in the last 30 years, more than any gun in history.[2] Many of the current styles of "assault rifles" produced by many major countries as well as third world countries are variations on the theme of the design of the AK-47.

Medical Consequences of Assault Rifles on Gunshot Wounds

Weapons that fire intermediate, rifle-sized cartridges such as assault rifles (AR's) and SAR's have some differences in wounding characteristics as compared to handguns or SAP's and full-size rifles. Ballistics experts argue continuously over the interrelationships of mass and velocity in wounding.[5, 6] But in very simple terms the greater the mass and higher the velocity, the worse the wound. Therefore, at close to intermediate range (out to 500 meters), AR's and SAR's produce wounds that may be as devastating as some full sized rifle wounds. But at far distances they will not deliver as much kinetic energy as accurately to the target as a full sized rifle. Another factor in wounding by these weapons is that cartridges for these weapons; AR's or SAR's, are almost invariably military type ammunition which means that projectile carries a "full metal jacket." This was mandated on all military ammunition since 1889 so that military projectiles would not "mushroom" like the soft lead projectiles in hunting rifle cartridges.[7] The mushrooming effect is imminently more destructive for a variety of ballistic reasons.[6, 8] Full metal jacket projectiles are not supposed to deform and therefore are supposed to produce less damage. Thus, in general a person shot by a hunting rifle projectile potentially may be much more seriously injured than a similar entry wound from an AR or SAR. There may be exceptions to this rule as some full metal jacket projectiles such as the M-16 projectile are reported to have a tendency to splinter from the base and produce deforming and multiple fragments.[8]

Wounds from AR's and SAR's are potentially more devastating than pistols and AP's/SAP's which fire low-velocity pistol cartridges. The exception would be near-target wounds from higher velocity "magnum" style handguns which can provide significant wounding at those distances. AP's and SAP's do not fire magnum-style cartridges.

Another consideration is multiplicity of wounds. Multiple wounds are almost always imminently more devastating than single wounds. Any weapon that can be fired multiple times has the capability of inflicting multiple wounds. Questions of relationships between rapid multiple firing and accuracy are beyond the scope of this paper. However, rapid repeatedly fired weapons are very inaccurate, especially at any significant distance from the target.

This again makes the AP/SAP much more desirable to many criminal elements as much of the gunshot wounding seen from street crime is produced at close range.

As always, knowledge of the weapon used in a shooting incident is of some aid to the clinician in helping to access the severity of a particular wound. However, this knowledge is often over emphasized and does not replace good general wound care principles,[6] as have been outlined by such organizations as the American College of Surgeons, the American Trauma Society, the American College of Emergency Physicians, etc.

Summary

In summary, the evolutionary history of assault rifles may be of interest to some medical practitioners. It is important to realize that the term "assault rifle" is incorrectly and overused in the lay press. As a rough generalization, the wounds from such weapons may fall in between those of handguns on one side and full-sized rifles on the other. The major caveat is that there can be major variations in the severity of any wound by any weapon and though it may be of some help in analyzing potential damage, knowledge of the inflicting weapon does not replace the need for good, well established principles of wound management.

★★★

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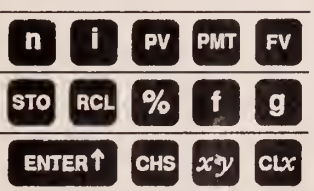
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SPECIAL ARTICLE

A Less Than Perfect Christmas

DWALIA SOUTH, M.D.
Ripley, Mississippi

BY 10:30 P.M. ON CHRISTMAS EVE I knew it had happened again. Once more I had succumbed to that annual paroxysmal fever commonly known as "The Christmas Spirit." My eight year old son's laments for a "4-wheeler" were squelched by an all-knowing Dad. His back-up request for a trampoline was a near-reality until three weeks before the holidays when I treated a neighboring youngster for a trampoline-fractured humerus. So near the big day I didn't have the heart to tell him any different. "Santa will just have to make that decision for us, son." All my good intentions of moderation were replaced by a guilt-induced toy shopping spree that exceeded even that of the previous season. Never say never again, huh?

I made the rounds of all my usual toy stashing locales — closets, high-up cabinets, attic corners, and the like. Then was formed the ritual conglomerate pile of playthings chosen to amuse and delight my pair of two and eight year old "cowboys."

By 11:00 I was kicking myself for buying so many battery-powered contraptions and *anything* labeled "some assembly required." The worst threat at hand was that infernal race car and track set. So tempting it was in that brightly colored box in the Radio Shack store. Now, in what should have been its finest hour, the red, yellow and blue plastic fragments seemed to belong only in the fireplace. And I, on this coldest Christmas in my memory, belonged in front of that same fireplace, in my recliner, holding a mug of hot chocolate with Bing Crosby records on the turntable.

Dr. South is a family practice physician in rural Northeast Mississippi. She also serves as the Tippah County Coroner/Medical Examiner.

At 11:30 the phone rang. I heard my husband, Chard, curse in the other room. We both knew that to receive a phone call on this date and at this hour meant that I would probably be summoned out either to a serious illness or a death. He hurried to answer it, so as not to wake the boys who would be sleeping lightly, listening for St. Nick. He handed me the receiver and a nervous county sheriff's department dispatcher said "Doc, we need a Medical Examiner out on Pocahontas Road. One of Ms. Barnett's rent houses is on fire and at least one fella has burned up that we know of. Just go out to the Pine Hill Primitive Baptist Church, take the first main road to the left and follow it 'til you see the fire about three miles out. You can't miss it."

Famous last words, I thought as I hung up. Putting on another layer of clothing and adding a goose-down parka, I grinned remembering how everyone had laughed and told me no self-respecting Mississippian would ever pay good money for such Yankee foolishness. Chard called time and temperature at the bank and the robot-voiced lady informed us it was "e-lev-en be-low ze-ro and fall-ing." All in all, it was shaping up to be another less than perfect Christmas.

En route to the fire I thought about Granny's proclamation earlier in the day when Jesse and Jack had asked about the possibility of a white Christmas. "Don't get your hopes up, boys, it's way too cold for it to snow." Jesse's retort of course was that "it was colder at the North Pole and they have snow, so why can't we?" I never understood that one myself, but it is a fact we've had snow here at Christmas only once in my lifetime.

Shortly after midnight I reached the church and

began looking for "the first main road to the left." There were six or eight in succession, none of them appeared to qualify as "main roads." All were dirt and none were marked.

Three weeks before, I had traded pick-ups and as luck would have it my CB radio had not yet been replaced. I drove faster and farther becoming progressively madder until I hit a paved road which I recognized and began looking for a place to stop to use the phone. Picking the most brightly decorated and well-lit homestead I could find, I pulled in, hoping its occupants would be up "playing Santa Claus" as I had been. The hunch was correct. Fortunately, the folks were acquaintances of mine who appeared somewhat shocked that Santa was a large lady in a tan overstuffed L.L. Bean parka. The man was loudly rebuking a bicycle that he was assembling. The lady of the house offered me coffee and I called the dispatcher to ventilate my anger and request better directions. After speaking to three people I finally received coherent instructions. At 1:00 a.m. the trek continued, and twenty minutes later I approached the scene. Fire Departments from both Ripley and Falkner were at work. I apologized and explained my tardiness. The chief said he couldn't be sure of the origin of the fire, but guessed the switch box area. Looking at the quality of the surrounding shotgun house and judging from the unseasonably cold weather my guess would be that it more likely started from an open fire, or an improperly vented wood stove. He then showed me the charred remains of the hapless victim — the elderly bachelor uncle of the home's tenants. The carbonized black skull and torso lay still smoking on a sheet of tin which had earlier been part of the roof. His nephew had been transferred to the hospital for treatment of smoke inhalation.

The wife and child had been removed just down the road to a cousin's home for safety. While the ambulance attendants waited for the burned body to cool down a bit, I took the requisite photos and gathered as much information as I could. The attendants wrapped him in sheets and then slid the coal-black bulk into a large zippered vinyl body bag. One of them joked as to how he would never again want any pit-barbecued ribs. Silently, we all agreed.

More detailed personal information was needed for the Coroner's report so I drove over to the next shack to interview the survivors. A rachety log truck was jammed right up to a half-hearted front porch. Billows of smoke poured out the chimney. There were no steps to the house, only some icy, disarrayed cinder blocks gave access. I knocked on the door and was admitted by a snaggle-toothed, slight young woman. The heat source of this home was a 55-gallon steel drum scotched up on some bricks in the middle of the living room floor. The house was quite warm at the expense of breathable air and sooted sightless windows. The girl had been a patient of mine and she began raking her fingers through stringy red tresses, begging pardon for the condition of her home. She opened the "drum-heater" and added a stick of wood as thick black smoke belched out and glowing coals fell to the floor. I felt compelled to warn her that her house could burn down as well, but I kept my mouth shut.

The mother and child who had been in the fire were easy to recognize. They were huddled on the couch wrapped in a tattered quilt and were a smutty gray from head to toe. They got up when I came in. The little girl was five and was clad in knit p.j.'s three sizes too small. A picture of ALF was on the front of the pajama top. She indeed gave the appearance of an "Alien Life Form" as she bashfully approached the small pile of cheap toys placed in one corner of the room. There was a "fly-back" paddle and ball, some coloring books and crayolas, some foil-wrapped chocolate Santas and a puzzle or two. She found and latched on to a small toy piano and began whaling away at it. Santa had already visited this house. I looked around and suddenly it dawned on me that there was no Christmas tree here. "These people live in the woods and are loggers for God's sake and they don't even have a lousy Christmas tree for their kids." I fumed inwardly.

The snaggle-toothed girl barked "Crystal Gail, you stop that, you'll wake up my boys." She ceased, but moved on to another toy.

I asked Crystal's mother if "Santa had been to their house" before the fire. I knew what the answer would be even as I spoke. "Yes, ma'm, I guess we lost everything — including Uncle Chess." She lit a cigarette, inhaled deeply and coughed. "Honey, how can you smoke after being in so much of it a while ago?" I queried. "Nerves, I guess," she replied.

I took down birthdates, times, all the usual facts in my notebook and I told them to call me if they needed any help anytime soon. In retrospect that was about the dumbest thing I ever said. Of couse, they needed help, more than any one person could give. I got up to leave and noticed that it was beginning to spit snow. I called Crystal Gail to the door to look out with me. I picked her up to show her outside. She laid her matted blonde little head up to mine and said, "Wow, It's snowing! Santa Claus will be here soon!" I thought about how ex-

cited my boys would be the next morning. But, they wouldn't be one bit happier than little Crystal Gail who had nothing at all, but didn't know it.

I cried a bit driving home, but not for Uncle Chess, or even for the man in the hospital, but for Crystal Gail. Abject poverty, deprivation and now a booster shot of terror — none of these things could immunize this child against the infectious syndrome we call "The Christmas Spirit." It was enough for her to go to sleep with the promise of playing with her cousin's toys in the morning and the ever-so-slight possibility of a bowl of snow ice cream.

At daylight, I must face Jesse's disappointment. "What, no 4-wheeler, and *NO* trampoline either?" He will find a jumbled race-track set, a guitar, tape recorder, and new cowboy boots. But, no trampoline. No, siree. If he has a problem with that, why I'll just pack him up and we'll take a little drive on Pocahontas Road. Then, I'll introduce him to Crystal Gail.

She is my heroine. Because of her I will never again complain about having a less than perfect Christmas. ★★★



Doctor,

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THE PRESIDENT'S PAGE

J. ELMER NIX, M.D.

Giving & Forgiving

At Christmas time each year, we become more aware of all the things for which we should be thankful, i.e. our health, families and friends, our profession, and the many opportunities that are ours in this great country. Medicine has made great strides, and today in the United States we have a life expectancy of almost four score years. Not only has the quantity of life improved, but immeasurable improvements in the quality of life have been made through medical advances. Let us stand tall and be not afraid to display the pride we have in our profession. We belong to a noble profession of which we have every right to be extremely proud. Winston Churchill was correct when he stated, "The profession of medicine and surgery must always rank as the most noble that man can adopt."

Now is the time of year for giving and forgiving, which brings me to consider a new, ethical problem in medicine . . . the "forgiving" of co-insurance.

Since entering practice, I have at times "forgiven co-insurance," i.e. I have accepted a third party reimbursement as sole and total compensation for services I had rendered. All of us have done that and we have done it through altruism, but there are some who have "forgiven co-insurance" for other reasons: Marketing: Some physicians use this as a way to attract and keep patients. Fraud: In some more egregious circumstances, this forgiveness has been used to defraud third party payors.

Many believe that the co-payment system acts as an effective way to reduce the use of health care services. The forgiveness of co-insurance may thus lead to increased cost through increased utilization of services. Federal law requires the physician to put forth a "good faith" effort to collect the co-insurance from Medicare patients. Medicare and Medicaid are now considering taking actions against providers who "forgive co-insurance" or waive deductibles. Insurance carriers sometimes argue, from a purely contractual standpoint, that they are bound to pay eighty percent of the actual charges, and if the doctor waives the twenty percent co-insurance, he has actually charged the patient only eighty percent of his usual fee. Therefore, insurance carriers should only pay eighty

(Continued on page 413)

EDITORIALS

JOURNAL OF THE
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Agenda

Agenda — A list, outline, or plan of things to be considered or done.

The word agenda has come into popular usage in recent years. Politicians and other public figures scramble over each other to espouse their agendas. Legislative bodies do likewise. Agenda is a word whose time seems to have come. Additionally, an agenda is organized with regard to prioritization. Where agendas mesh, harmony follows. Where agendas do not mesh, discord may result.

At the risk of overuse and abuse, a poignant question arises: What is medicine's agenda? More pertinent for the purposes of this journal, what is organized medicine's agenda? Certainly there are enough concerns in the health care arena for all to share. But what are our priorities? Every worthwhile goal or objective cannot be practically accomplished. Organized medicine must have a prioritized agenda in order to accomplish goals. But to be meaningful, the agenda must be understood and supported by the membership. Can we, at the state and national level, honestly say that we have such an agenda? And if so, is this agenda effectively communicated to the membership for appropriate feedback so that it truly represents the desires of the membership? If not, then we have no hope of influencing the evolution of health care in this country. On the other hand, armed with a positive agenda fully supported by the membership, medicine can assume a leadership role in that evolution. Maybe the time has come for medicine to join the "AGENDA PARADE!"

George E. Abraham II, M.D.
Associate Editor

President's Page

(Continued from page 412)

percent of that eighty percent . . . rather than paying eighty percent of the doctor's full and usual fee.

"Forgiveness" can be used as a marketing tool and physician motivation may be one of patient advocacy, financial self-interest or both. Payment of the oft required twenty percent co-insurance may be such a financial burden to some patients that they will switch to another physician who forgives the co-insurance, while some patients who are financially able to pay, may change doctors just to save that twenty percent. Personally, it goes against my grain to see "across the board" forgiveness of the co-insurance. I believe "forgiveness" should be reserved for those who financially needs the "forgiveness," i.e. forgive for altruistic reasons. However, we must remain aware that some third party payors see this "forgiveness" in a way that is quite different from the physician's viewpoint. Today, I am just thankful that medical marketing was essentially unheard of when I started my practice.

Fraudulent forgiveness is another story and it does happen. The worst scenario I know about was recently described in the New England Journal of Medicine as follows: Several doctors set up mobile laboratories that could be parked at local affluent health clubs to do screening tests on club members who wanted to be tested. A parking fee of $1,000.00 per hour (WOW!) was paid to the health club. The patrons were told there would be no charge to them; their private health insurance would serve as payment in *full*. No bill was ever sent to the patient, but months later each patron received notification that the insurance carrier had made payments of $12,000.00 to $15,000.00 per patient. At this point some patrons realized that most of the "billed services" had never been performed. These "forgiving" doctors had billed the insurance companies and Medicare for more than two hundred million dollars with this scheme.

This country in which we live is the greatest in the world — partly due to Yankee ingenuity . . . but when do we cross the line from Yankee ingenuity to con artist? Clearly, some doctors do not know the answer to that question. Hippocrates said "I advise making no excessive demands, but to take into account the means and income of the patient. In certain circumstances the physician should give treatment for nothing."

Let us continue to be thankful and let us continue to "forgive co-insurance" . . . for altruistic reasons and not to defraud anyone. Each individual must

decide if he wishes to use "forgiveness" as a marketing tool.

Merry Christmas!

LETTERS

To: The Editors and All County Medical Societies
From: James A. Klicpera, M.D.
Topic: *Theophylline toxicity*

Theophylline toxicity resulting from overdose has been recognized for a long time as a potential problem when using this drug in the management of reactive airways disease. It is now recognized that elevated temperature lasting 24 hours or longer and probably many viral infections can significantly alter the clearance of theophylline resulting in elevation of serum theophylline levels into the toxic range. Seizures with permanent severe brain damage may occur as a result of high serum theophylline levels. Please have your members who use this drug review the medical literature regarding the safe use of theophylline. Consider using other medications first before using theophylline. If theophylline is used, keep serum levels between 5-15 ug/ml instead of the 10-20 ug/ml range and should fever or viral infections of 24 hours duration or longer occur reduce the dose of theophylline by ½ during that illness or if that is not safe then monitor theophylline levels more carefully.

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The Future Generation

(Editor's Note: This article by Dr. J. T. Davis of Corinth, MS was printed in the September issue of this publication. Because of a Journal error in paste up, we are reprinting Dr. Davis's article as originally submitted.)

The study and practice of medicine is and has been a noble profession. For centuries it has offered, and is now filled with opportunities, for those who hunger for a life of service, usefulness, self-satisfaction and who have compassion for others.

In recent years, there has been a growing concern among our leaders in the profession regarding the future of medicine. Government interference, malpractice problems, the irresponsible insurance industry, and the many abuses of the health care programs by the public, the provider and the bureaucrats, contrary to the Legislative edict and intent, have reached the point that the study of medicine is no longer attractive to our young, talented and dedicated students.

The declining number of applicants to our medical schools, as evidenced by the medical schools advertising for students, is a formidable warning to the medical profession and strikes at the very heart of the future of medicine and quality health care.

The stress and concerns are understandable for those who have been privileged to have practiced medicine during the "Golden Years," when the dedicated physician occupied the pedestal of respect in his community and a position of authority in health problems. His instructions to his patients were commands to be followed without question. That image has faded in recent years, in spite of the many remarkable innovations and phenomenal strides in the health care field.

Prospective medical students, as they stand at the threshold of their career, seeking their life vocation, are ever mindful and influenced by the problems they see, the greatest of which appears to be government medicine. The malpractice litigations are not serious detriments as they see progress toward moderation with improving quality care and increasing tort control. However, government interference appears progressive and beyond control with its irreconcilable trend, prevailing fee discrimination and oppressive bureaucratic edicts to the point of near subjugation of the medical profession in a futile attempt to balance cost with budget. This offers little allure for prospective students since they have many other choices.

It is true that cost control has been a problem and Medicare must stay within the budget. But the laws of nature have told us for centuries, as the medical profession advised Congress in 1964, that any program of free health care offered to the public would be abused by both beneficiary and provider and would overwhelm the national budget. Too, since 1965, the Congress has encouraged utilization by tacking on many expensive health care services. The new innovative and sophisticated clinical tests, reflecting the marked advances in medical care and

demanded by the public, must be calculated in the spiraling cost of health care. Inflation, the rapidly elevated malpractice insurance premiums, the advancing age of "Graying America" with all their maladies and the lure of the greenback for a few less dedicated doctors were not considered in estimates of cost of 1965.

It is agreed that the intent of Medicare is apropos and commendable, but difficult to control. However, there is no such thing as a free lunch. The standards of quality medical care dictate the use of these many new innovative tests and equipment as they become available to the physician, and they carry expensive prices beyond the control of the doctor. The Medicare program as of today is increasingly schizophrenic about cost control versus quality care. The present status of government medicine is not compatible with the prevailing progress of health care to which the public has been accustomed. If the public continues to demand their right to healthcare and the government expects the best of medical care, someone must pay the bill.

Where and when did legal precedent arise that allows the Federal Government to control justifiable fees of any profession, legal or medical? No one, except a *Wall Street Journal* reporter, questioned the $20,000,000.00 legal fee charged an industrial corporation for two weeks' work in 1989. Had any doctor or clinic in the U.S.A. made such a ridiculous charge to save a life, whether it required two weeks or six months, the fee would not have been paid and that physician or clinic would have been sanctioned and ridiculed by peers and would in turn have subjected itself to prosecution by the Federal Government. What is life worth to one and one's family, whether he be doctor, lawyer, politician or a member of our Congress? In the eyes of the Federal Government, is life expendable in an effort to balance the budget and worth less than the legal vitality of an industrial corporation?

It appears the Medicare program has been squeezed to an irreducible minimum and changes are in order. No program of health care will ever be successfully implemented by force or intimidation. The future success of Medicare will depend upon many changes, e.g., elimination of discrimination; correction of the mal-distribution of physicians and fees; the eradication of the dangerous practice of overshadowing physician's medical decisions by non-medical and inexperienced persons; the redefining of the definition for quality care and the setting of new guidelines with acceptable legal standards to meet the dwindling Medicare budget; discontinuation of the red tape and harassment which, by usurping valuable time of the physician, precludes good medical care and adds additional expense, and last but not least, the building of incentives into the program.

The legalization of passive and/or active euthanasia as a means of cost control of health care of our expanding "Graying American" may soon be bitterly debated, contrary to medical ethics and corrosive to the professional virtue of medicine.

The recent practice of Medicare stating that the physician has, or is, treating his patients on too high a level of medical care without Medicare having personal knowledge of the patient's clinical condition may be, in many instances, interpreted as passive euthanasia. This is inflammatory to the patient's family and to the public.

It is hopeful that Congress in its wisdom will recognize and attempt to correct these mal-functioning elements. The international scenario and the prospects of the "Peace Dollar" may help our economy and in turn benefit the health care of our increasing number of senior citizens.

The medical profession, too, must assume its responsibility in its efforts to improve the delivery of the best medical care in this world, e.g., encourage C.M.E., continue peer review, hold the line on cost compatible with good care, reassess the legal aspects and advisability of affiliations with third party organizations (H.M.O., P.P.O., etc), and with the strength of organized medicine continue the struggle to overcome the present obstacles that threaten the future of good medicine.

One should view the paucity of applicants to our medical schools as a serious threat for the future. This is a changing world and we must "Roll With the Punches," but if we, as a caring profession, expect to survive and grow with dignity and respect, we must "hold the line," and in the interim we must begin to ferret out and recruit the best of our youth that they might continue the struggle to maintain quality care for our patients, against whatever obstacles there might be.

Advising one of his or her life work is a serious matter, not to be treated lightly or in a self-serving manner. In the light of our past experiences and our present knowledge of the quagmire of problems facing the medical profession today, it is difficult to transgress one's conscience when one talks to and advises a prospective student. We must be fair and at the same time be prepared to present the cons as well as the pros intertwined with a great deal of philosophy of life and living.

A few pertinent questions may assist in an appraisal of each student, will focus our attention upon

the better qualified and at the same time will focus the student's attention upon the realities of professional life and the rewards of being a good doctor; e.g., (1) What is your philosophy of life and what is your goal? (2) What does it take to make you happy? (3) Do you love to help others do things they can't do for themselves? (4) Are you willing to accept at least 50% of your expected compensation for the self-satisfaction of having done a good job and a good deed for someone sick, lame or disabled? (5) Does your life-style demand wealth and is making a lot of money your ambition and goal? (6) Are you prepared and are you willing to devote long hours of work and study and bear the heavy expense required to obtain a medical education? (7) Will the constant and increasing demand for your services as a doctor be a nuisance to your home life? (8) Do the vicissitudes of government medicine and prospects of socialized medicine discourage you?

The medical profession is an honorable profession and the study of medicine is considered the best education one may obtain in America today. It is filled with the greatest opportunities to satisfy that hunger and desire to help others, command the respect of one's community and peers for a job well done and reap the benefits and satisfaction of close relations with the family life of one's patients. Then, when the gray shadows of retirement begin to fall, one may have the privilege and satisfaction of reflecting upon a long and happy journey through life filled with memories of duties well performed in the service of mankind. "The true measure of a man's worth is determined by the sum of what he owns that money cannot buy and death cannot take away." (author unknown)

The practice of medicine has much to offer the students of the future generation whose goal is not seeking wealth but who are dedicated to the welfare of their fellowman. Although the cost is great, the practice of medicine remains a challenge worthy of the effort.

J. T. Davis, MD
Corinth, MS

Medico Legal Brief

Nurse-Anesthetist Loses Suit Against Hospital

A certified registered nurse-anesthetist was not entitled to medical staff privileges at a hospital, the Mississippi Supreme Court ruled.

The nurse-anesthetist was the principal provider of anesthesia services at the county hospital for many years and was considered to be very well qualified. From April 1971 through September 1982, she operated as an independent contractor, providing services at the hospital as requested by surgeons and obstetricians.

On September 30, 1982, the nurse-anesthetist entered into a written contract with the hospital, providing that it would bill patients and remit 60 per cent of the amount charged to the anesthetist. She was to have liability insurance for not less than $1,000,000. The hospital was not to pay less for her services than other contracting parties were receiving for anesthesia. The five-year contract was subject to cancellation by either party on a 90-day written notice.

When the hospital suffered a decrease in income, it gave the nurse-anesthetist the required 90-day notice to terminate her contract. The letter stated that it had become necessary to renegotiate certain professional service contracts. The hospital proposed a contract to pay the nurse-anesthetist approximately $50,000 for her services. She informed the hospital that she did not wish to renegotiate the contract, but that she would practice anesthesia on her own for two surgeons who belonged to a group that provided approximately 80 per cent of the surgery at the hospital and for all other physicians who wanted to use her services.

The hospital became concerned with its potential liability if the nurse-anesthetist was held negligent while administering anesthesia in the hospital. The two surgeons finally signed an agreement whereby they would hold the hospital harmless against any claim arising out of their use of the anesthetist's services. One of the surgeons refused to sign a second document that included a provision that he would not sue the hospital and it would not sue him for previous acts.

The hospital filed a complaint for the purpose of determining whether the nurse-anesthetist could sell her services and practice in the hospital without a contract. The nurse-anesthetist filed a counter-claim charging violation of antitrust laws, that she had clinical privileges entitling her to practice as an independent contractor and that the hospital had breached its contract in paying another nurse-anesthetist more than she was paid.

The trial court ruled that the hospital was exempt from state antitrust laws. The court said that the nurse-anesthetist did not have the right to practice at the hospital without a contractual agreement. The court awarded her $10,392 for breach of contract

during one month that the hospital paid another nurse-anesthetist 100 per cent of the amount billed for his services.

The nurse-anesthetist contended that she had medical staff privileges or was entitled to them. The court found that the hospital and medical staff by-laws made no provision for staff membership for certified registered nurse-anesthetists. Further, the court said that she was not entitled to work at the hospital without an agreement. The court said that the hospital did not owe her a hearing or explanation prior to termination.

The Mississippi Supreme Court held that there was no reversible error and affirmed the lower court's decision. The court, however, modified the judgment of $10,392, reducing it by $940 for charity work that the other nurse-anesthetist performed. — *Wicker v. Union County General Hospital,* 556 So.2d 297 (Miss.Sup.Ct., Nov.15, 1989; rehearing denied, Feb. 14, 1990)

Physicians' Recognition Award

Nine MSMA members were named recipients of the AMA Physicians' Recognition Award in August and October 1990. This award is presented by the American Medical Association to physicians who have voluntarily completed a minimum of 50 hours of continuing education within a one-year period. Physicians can receive the PRA certificate valid for one, two, or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1. These nine individuals are presented below by medical society.

Central
Brett Lawrence Arron, M.D.
William Alexander Long, M.D.

Homochitto Valley
Charles Daniel Borum, M.D.

North Central
Thomas Page McGee, M.D.

Northeast
John Melvin Patterson, M.D.

South Mississippi
Richard Alan Johnson, M.D.
Victor E. Landry, M.D.
Adron Keith Lay, M.D.
William Meredith Temple, M.D.

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AMA Delegates Report

J. EDWARD HILL, M.D.
Hollandale, MS

As I WRITE this it is again time for an American Medical Association House of Delegates Interim Meeting — this one to be held in Orlando, Florida the first week in December. With a size similar to our own U.S. Congress and with perhaps a more democratic and certainly more representative body, we will spend five to seven days, deliberating, debating and reaching consensus on a voluminous amount of material and a large number of issues that should be of great interest to each of you.

The House of Delegates consists of 348 state association delegates, 77 national medical special society representatives, student, resident, hospital medical staff, young physicians and medical school delegates in addition to five uniformed services delegates. This totals 435 delegates and an equal number of alternate delegates who participate in this meeting. As you can see, over 870 physicians throughout the nation are involved in this meeting twice a year.

The volume of material that must be read, debated and acted upon at this meeting will include over 50 special reports of the American Medical Association Board of Trustees and over 45 reports from AMA councils on numerous aspects of education, legislation, medical services, constitution and by-laws, scientific affairs, and ethical and judicial affairs. There will also be joint reports from some councils that have a common interest in particular issues. There are over 120 resolutions that will be evaluated and acted upon at this meeting. You cannot imagine an aspect of health care or medicine that will not be presented and debated, many for the first time; but since the AMA policy-making process is mostly evolutionary in nature the majority of issues will have been acted upon previously. For instance, the AMA's endorsement of a Resource Based Relative Value Scale as a basis for Medicare payment had its origins at the 1985 Annual Meeting, but the AMA's policy on the RBRVS has been refined at both the Annual and Interim Meetings over the past five years. The geographic practice costs component of the RBRVS will again be debated at this upcoming Interim Meeting.

Even though the final actions of the House of Delegates are published in *American Medical News* and other communication mechanisms, there is nothing to equal the excitement and enthusiasm engendered by actually attending the House of Delegates meeting and participating in it. Every member of the Mississippi State Medical Association has the right to appear and testify about any issue in the Reference Committee hearings that cover every issue to be addressed at the meeting. It appears that the barriers to attending AMA meetings by the general membership have been time and finances, but it is possible to attend an AMA meeting with a minimum of lost practice time and out-of-pocket expenses. For example, each hospital medical staff in Mississippi has the opportunity, and I believe should have the obligation, to send a delegate to the AMA's Hospital Medical Staff Section. This section meeting challenges the House of Delegates in it's size and expertise and your hospital medical staff should be involved. Does your medical staff participate? If not, volunteer or see that someone is sent to represent you. Your hospital administration may or may not be particularly disposed to promote this.

If you cannot attend one of these AMA meetings, inquire about having an AMA delegate or alternate delegate make a presentation to your medical staff concerning current issues being addressed by the AMA. Utilize the large resources of your American Medical Association.

If you have an innovative or practical solution to what you perceive as a significant health care problem, convey that to your AMA delegates or alternate delegates so that it can be considered at the national level.

Please become interested, informed, and involved.

Season's Greetings

from the

MSMA Auxiliary on behalf of the AMA-ERF



Mrs. Eric E. Lindstrom (Nancy)

Mrs. Timothy J. Alford (Mary Al)
Mrs. John Bagnato (Jeni)
Mrs. James L. Ballard, Jr. (Renee)
Mrs. Jim C. Barnett (Roberta)
Mrs. John M. Beaman (Sandra)
Mrs. John W. Bowlin (Linda)
Mrs. Jim Boyd (Hilda)
Mrs. Daniel L. Brasfield (Frances)
Mrs. Ben Carmichael (Kathy)
Mrs. Kenneth G. Carter (Judy)
Mrs. Tommy Cobb (Laura Lea)
Mrs. Dewitt Crawford (Peggy)
Mrs. Roy D. Duncan (Lynn)
Mrs. Fred G. Emrick (Mary)
Mrs. Carl Evers (Jan)
Mrs. John Estess (Dottie)
Mrs. H. Allen Gersh (Cathy)
Mrs. Robert N. Gilliland (Fran)
Mrs. D. Stanley Hartness (Beth)
Mrs. Joe D. Herrington (Peggie)
Mrs. William M. Hilbun, Jr. (Lucy)
Mrs. J. Edward Hill (Jean)
Mrs. Stanley A. Hill (Alice)
Mrs. Craig Howard (Jan)
Mrs. Hugh H. Johnston (Hazel)
Mrs. David D. Madden (Marianna)
Mrs. Thomas J. McDonald (Susan)
Mrs. Don Mitchell (Mary Sue)
Mrs. Ellen M. Moffitt (Nina)
Mrs. William A. Morrison (Jeanne)
Mrs. J. Elmer Nix (Rosemary)
Mrs. David M. Owen (Sara Ann)
Mrs. William H. Preston, Jr. (Jane)
Mrs. Dan Reikes (Anita)
Mrs. J. H. Robinson (Rose Lee)
Mrs. Lee H. Rogers (Merrell)
Mrs. Hildon H. Sessums, Jr. (Lisa)
Mrs. Doyle P. Smith (Ruth)
Mrs. David B. Stephens (Karen)
Mrs. Luther Stumme (Kathy)
Mrs. A. T. Tatum (Martha)
Mrs. Charles Thompson (Catherine)
Mrs. Shane Tucker (Pam)
Mrs. James C. Waites (Jo)
Mrs. B. L. Walker (Sylvia)
Mrs. Henry H. Webb (Barbara)
Mrs. Lamar Weems (Nanette)
Mrs. Murray P. Whitaker (Martha)
Mrs. Thomas B. Whitehead (Martha)
Mrs. Richard S. Whitlock (Maura)

ARMY RESERVE MEDICAL PROFILE NO.9



Dr. Holwick outside of hospital where she practices as a civilian traumatologist.



Dr. Holwick in operating room at Letterman Army Medical Center.

JANN L. HOLWICK, M.D.

General and Trauma Surgeon.
Captain, U.S. Army Reserve.

EDUCATION University of Southern California, B.S.; University of California School of Medicine.

RESIDENCY Harbor General Hospital—UCLA Medical Center.

HOSPITAL AFFILIATIONS St. Luke Hospital; Huntington Memorial Hospital, Pasadena, California; Traumatologist, Arcadia Methodist Hospital, Arcadia, California.

OUTSTANDING ACHIEVEMENTS Borden Freshman Prize; Alpha Lambda Delta; Phi Beta Kappa; Phi Kappa Phi; Bovard Award; ALD Award; American Institute of Chemists Medal Award; Summa Cum Laude, University of California; Alpha Omega Alpha.

"When you enter private practice, the only cases seen are usually those limited to your specialty. Serving as a physician in the Army Reserve offers me a departure from my daily routine. I can be involved in virtually anything I choose. If a certain case interests me, I can ask to be part of the surgical team. If I wish to spend time teaching students, I have that option, too.

"As a Reserve physician, I've had the opportunity to interact with different people, from various backgrounds, with assorted medical and social viewpoints. As a result, I've grown as a physician and as a person.

"I spent six months looking into the Army Reserve program before I joined, wanting to make sure that my skill and time would be put to good use. I've been a Reservist three years now, and I still find it extremely rewarding. I have the satisfaction of knowing that I'm serving my country."

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Contraindication: Known allergy to cephalosporins.
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
• Discontinue Ceclor in the event of allergic reactions to it.
• Prolonged use may result in overgrowth of non-susceptible organisms.
• Positive direct Coombs' tests have been reported during treatment with cephalosporins.
• Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
• Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of **serum-sickness-like** reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, **serum-sickness-like** reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
• Stevens-Johnson syndrome, toxic epidermal necrolysis, and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.
• Gastrointestinal (mostly diarrhea): 2.5%
• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
• As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
• Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
• Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology.
• Slight elevations in hepatic enzymes.
• Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
• Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
• Abnormal urinalysis; elevations in BUN or serum creatinine.
• Positive direct Coombs' test.
• False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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Dr. and Mrs. Jim C. Barnett

Dr. Jim C. Barnett Elected President SMA

Jim C. Barnett, M.D., Family Physician and General Surgeon from Brookhaven, Mississippi, was elected President of the Southern Medical Association (SMA) for 1990-91 during the First General Session of the Association at its 84th Annual Session held in Nashville, October 14-17. The SMA Auxiliary elected Roberta Barnett as its president at its General Session also held during the Annual Meeting. This is the first time in SMA's history that a husband and wife will hold the position of President of the SMA and SMAA simultaneously.

Dr. Barnett is a past Chief of Staff and current staff member of the King's Daughters Hospital of Brookhaven. He has served two terms as president of the South Central Medical Society, and is a member of the State Board of Mental Health, serving twice as Chairman of the Board. He currently serves as a member of the Council on Legislation of the Mississippi State Medical Association.

Mrs. Roberta Barnett is a past president of the MSMA Auxiliary where she continues to be active as chairman of the Medical Liability Support Committee.

Dr. Benton M. Hilbun Elected Chairman

Benton M. Hilbun, M.D., a surgeon from Tupelo, was elected chairman of the Mississippi State Board of Health during the Board's October meeting.

The 13-member Board, which includes health care givers and users, provides policy guidance to the 2,800-employee Mississippi State Department of Health. Two Board members each represent the five Congressional Districts, and three serve state-at-large.

Maurice James, M.D., an ophthalmologist of Jackson, was one of four new gubernatorial appointees to the Board. Dr. James was appointed to a six-year term.

James L. Crosthwait, M.D., of Jackson is also currently serving as a member of the Board.



During October and November the MSMA Auxiliary held seven successful Legislative Workshops. These one day workshops held at various locations over the state were conducted by MSMA Director of Legislative Activities Clare Elliot. Pictured above are Auxilians participating in the session held in Jackson. In the workshops, Auxilians learned about key issues that will be addressed in the 1991 Legislative Session and how to reach their legislators with information.

PERSONALS

Richmond Alexander, of Laurel has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

William R. Arnett of Hattiesburg, a family practice physician, is serving as a preceptor for Richard Harvey, a third year medical student at UMC.

Guy R. Braswell and **Ronald Braswell** announce the opening of the Braswell Eye Clinic specializing in diseases and surgery of the eye, 112 Wells Street, Kosciusko.

Kurt Bruckmeier of Hattiesburg has recently been certified in geriatric medicine.

Lisa Clark Bushardt of Hattiesburg recently became a Diplomate of the American Board of Family Practice.

James D. Cady, Jr. of Meridian has successfully completed the American Board of Family Practice Certification examination, and is now certified as a Diplomate of the American Board of Family Physicians.

Robert C. Clingan of Vicksburg announces his association with The Dermatology and Skin Cancer Clinic in the practice of Dermatology.

John Mitchell Ford of Baldwyn was re-appointed to the American Academy of Family Physicians for the years 1990-92. He was awarded the degree of Fellow from the American Academy of Family Physicians in 1990.

Robert N. Gilliand of Kosciusko has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Joe Hasek of Eupora spoke on melanomas and skin cancer at the regular monthly meeting of Webster General Hospital's cancer support group, Faith.

Karl Hatten of Jackson, president of the Mississippi Society of Internal Medicine served as a delegate to the 34th Annual Meeting of the American Society of Internal Medicine.

Eugene Hesdorffer and **Tom Louis, III** of Jackson announce the relocation of their office for the practice of Ear, Nose, & Throat ENT Allergy to St. Dominic West Medical Office Tower, Jackson.

Phil A. Hooker of Starkville announces the opening of the Skin and Allergy Clinic for the practice of allergic diseases and dermatology.

Jack G. Hudson of Hattiesburg, a family practice physician, is serving as a preceptor for Barbie Davey, a third year medical student at UMC.

Henry E. Irby of Jackson attended the International Conference on Addictions in Montreux Switzerland and presented a paper on the Problems of Substance Abuse in the Rehabilitation Patient Population.

Deborah Tullos Lee of Clinton has been selected to be inducted into Who's Who in Mississippi.

Leanna K. Lindsey has associated with the Internal Medicine Associates of Tupelo, LTD. for the practice of internal medicine.

M. Gerald Lowrimore announces the opening of his office for the practice of Invasive Cardiology at #6 Parkhill Plaza, 1104 W. 1st St. Laurel.

Rebecca Garretson Lyons of Jackson has associated with the Mississippi Asthma and Allergy Clinic, P.A. in Jackson.

William Thomas Mayer of McComb has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Fred James McDonald of Hazlehurst has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

S. Jay McDuffie of Nettleton was recognized by the Chamber of Commerce and the Town of Nettleton for his 40 years of medical service to the community.

Gordon S. McHenry of Wiggins has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.


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PERSONALS/Continued

William S. McKell, Jr. of Moss Point has been named as Southern Director for the Mississippi Chapter of Safari Club International an organization of conservationists who hunt.

Brantly B. Pace of Monticello has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

Pravinchandra P. Patel of Coldwater has competed medical education requirements to retain active membership in the American Academy of Family Physicians.

Charles R. Robertson, Jr. presented a seminar on Private Practice of Pediatrics to residents at Children's Hospital, Boston, MA.

Bernadette Sherman of Natchez announces the relocation of her office to Natchez Medical Plaza for the practice of obstetrics and gynecology.

Wayne Slocum of Tupelo recently completed a "Death Defying Trek" to the summit of Mount Ranier in Washington.

Tate Thigpen of Jackson, president of Optimist International was honored for his dedicated service to Optimist during a recent meeting of the Mississippi District.

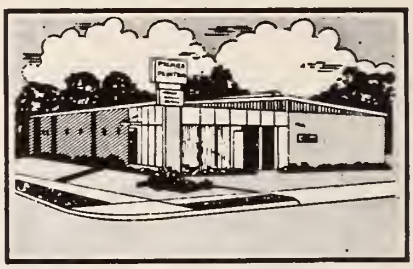
Allen Hale (Buddy) Thompson of Greenville has associated with **Ben P. Folk, III** for the practice of Internal Medicine.

Gary P. Wood announced the opening of an office for the practice of obstetrics and gynecology, 2500 Fifth Street North, Columbus.

Tom Wooldridge of Tupelo addressed Booneville Baptist Memorial Hospital staff on "Calcium Channel Blockers in Hypertension."

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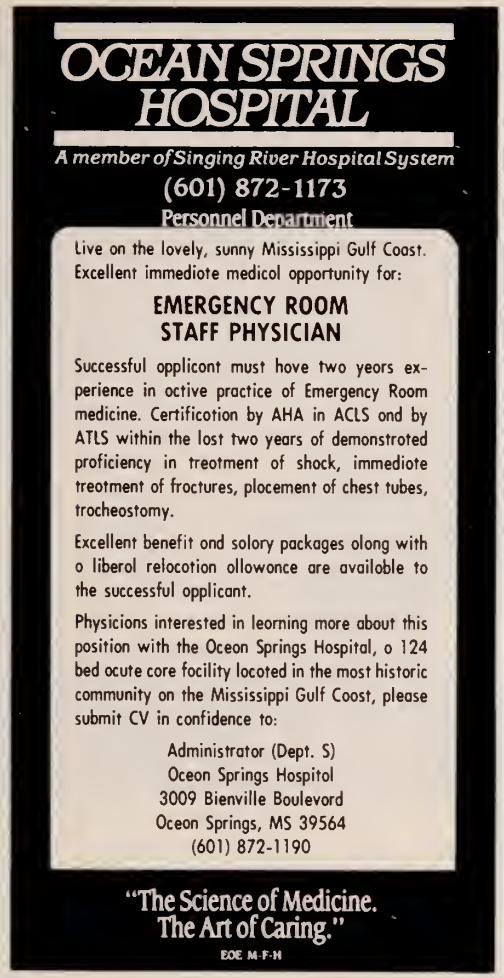
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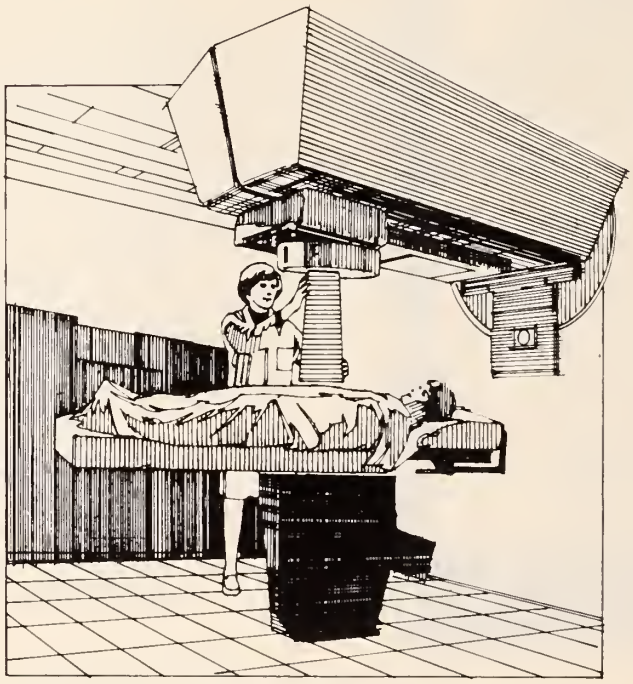
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Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema*: Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function*: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (>5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy – Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), pulmonary embolism and infarction; pulmonary edema, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis (hepatocellular or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth.

Musculoskeletal: Muscle cramps.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin: Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, hyperhidrosis.

Special Senses: Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing.

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgias/arthritis, myalgias, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol%, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension*: In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Patients with Heart Failure and Renal Impairment or Hyponatremia: In patients with heart failure who have hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

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THERAPY THAT MAY BE AS SILENT AS HYPERTENSION ITSELF

VASOTEC is generally well tolerated and not characterized by certain undesirable effects associated with selected agents in other antihypertensive classes.

VASOTEC is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

A diminished antihypertensive effect toward the end of the dosing interval can occur in some patients.

For a Brief Summary of Prescribing Information, please see the last page of this advertisement.

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